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Title:
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U.S.
General
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Munitions
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Minutes
April 4 -
August 9, 1917

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MUNITIONS INDUSTRY

MINUTES

OF THE

GENERAL MUNITIONS BOARD

FROM APRIL 4 TO AUGUST 9, 1917

Printed for the use of the
Special Committee Investigating the Munitions Industry

UNITED STATES
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WASHINGTON : 1936

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SPECIAL COMMITTEE INVESTIGATING THE MUNITIONS INDUSTRY

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LETTER OF CERTIFICATION

UNITED STATES OF AMERICA,
WAR DEPARTMENT,
Washington, May 9, 1935.

I HEREBY CERTIFY that the attached papers are true copies of records of the War Department as contained in the files of the War Industries Board, on file in the office of The Assistant Secretary of War, Washington, D. C.

HARRY B. JORDAN,
Colonel, Ordnance Department,
Custodian of Records, War Industries Board.

I HEREBY CERTIFY that Colonel Harry B. Jordan, who signed the foregoing certificate, is the Custodian of Records of the War Industries Board, and that to his certification as such full faith and credit are and ought to be given.

IN TESTIMONY WHEREOF I, George H. Dern, Secretary of War, have hereunto caused the seal of the War Department to be affixed and my name to be subscribed by the Assistant Chief Clerk of the said Department, at the City of Washington, this Ninth day of May 1935.

[SEAL]

GEO. H. DERN,
Secretary of War.
By F. M. HOADLEY,
Assistant Chief Clerk.

EXPLANATORY NOTE

This volume was printed from certified copies of the original General Munitions Board minutes which were supplied to the Committee by the War Department. All typographical and grammatical errors, breaks in continuity of the text, and mistakes and omissions are printed exactly as they occurred in the original. The committee finds that it is beyond its province to incorporate the necessary corrections.

MINUTES OF THE GENERAL MUNITIONS BOARD

1 *Resolved*, That the Secretary of War, as Chairman of the Council of National Defense and under authority of the Act of August 29, 1916, "For the coordination of industries and resources for the national security and welfare", and under the specific authority in the Act, which provides for the appointment of subordinate bodies", shall appoint a General Munitions Board, Council of National Defense, to be composed of Army and Navy Department heads or officers appointed by them and representatives appointed by the Advisory Commission, the purpose being coordinate the buying of the several Departments; assist in the acquirement of raw materials and manufacturing facilities; the establishing of precedence of orders, etc., including the ordinary commercial and industrial needs and the military requirements of the nation. Such committee shall have no authority at this time to issue purchase orders, make contracts, or bind the Government in its purchases; all these things to be done, as at present, by the respective departments. The Chairman of the Committee, however, shall have authority to require, when necessary, that certain (conflicting) purchases be not made until the same, with a full statement of the facts, have been submitted to the Secretary of War or Navy.

2 **Plans of Procedure of Munitions Board of Council of National Defense Approved and Adopted April 4th, 1917**

The Munitions Board of the Council of National Defense in committee assembled deems it pertinent at this time to recognize and enumerate the following:

(a) That questions of actual purchase of material are not to be handled by "The Munitions Board." Its duties, on the contrary, will be confined insofar as practicable to facilitating the work of purchase and supply agencies now existing in the War and Navy Department organizations.

(b) That the mission and purpose of the country is as set forth in the Message of the President.

(c) That this committee strongly affirms its intent to maintain insofar as may be practicable the existing order of things in the industrial condition of the country; the order of delivery of military and naval material, both domestic and foreign, as provided under existing contracts, will not be disturbed unless absolutely necessary to meet requirements which may develop in the future.

(d) That in the execution of present and in placing future contracts for military and naval material careful consideration will be given to industrial requirements so far as practicable.

(e) That order of priority of delivery of various kinds or material required by the War and Navy Departments will be determined so far as possible by cooperation between the various Bureaus and Offices of these Departments directly concerned and that full consideration will be given to the importance of early and prompt
3 delivery of material under contract, or subsequently ordered, for shipment abroad to belligerents friendly to the United States.

(f) That it is the opinion of this committee that immediate action should be taken by appropriate authority to insure the integrity and maintenance of the industrial organization of the Country in relation to preparation of military and naval material and to emphasize the very high military importance of such industrial work.

(g) The Board recognizes the importance of supervising future commitments of United States Manufacturers for delivery of material to foreign purchasers and that all such prospective foreign commitments should be subject to approval by competent authority in order to prevent interference with prompt delivery of more urgently needed military and naval material.

4 COUNCIL OF NATIONAL DEFENSE,
Washington, April 9, 1917.

(Immediate Release)

A General Munitions Board has been created by the Council of National Defense.

This action constitutes another successive step on the part of the Council in the preparations for war. It was taken at a joint meeting of the Council of National Defense and its Advisory Commission.

The General Munitions Board will be headed by Frank A. Scott, vice president and treasurer of the Warner & Swasey Company, of Cleveland, a well-known manufacturer, who is one of the leading experts of the country in the quantity production of munitions. The full membership of the board is as follows:

From the army: General Thomas Curse, Colonel F. G. Hodgson, Colonel H. Fisher, Lieutenant Col. J. E. Hoffer, Major P. E. Pierce, Major Charles Wallace, and Captain A. B. Barker. From the navy: Admiral H. H. Rousseau, Admiral W. S. Capps, Commander R. H. Leigh, Commander T. A. Kearney, Doctor R. C. Holcomb, Paymaster J. H. Hancock, Lieut. Col. W. B. Lemly, and Mr. L. McH. Howe. And representatives of the following committees of the Advisory Commission of the Council of National Defense: Raw Materials, Bernard M. Baruch, Chairman; Industrial, Howard E. Coffin, Chairman; Supplies, Julius Rosenwald, Chairman; Medicine, Dr. Franklin Martin, Chairman.

5 The Secretary of the General Munitions Board will be Chester C. Bolton.

The officers serving on the board were designated by the chiefs of the several departments and bureaus, under authority of the secretaries of war and of the navy.

The purpose of the General Munitions Board is to assume the prompt equipping and arming, with the least possible disadjustment

of normal industrial conditions, of whatsoever forces may be called into the service of the country. The immediate efforts of the board will be directed on lines calculated to coordinate the making of purchases by the army and navy; to assist in the acquirement of raw materials and of manufacturing facilities, and to establish the precedence of orders between the departments of war and of the navy and between the military and industrial needs of the country.

It is not intended that the new board shall have authority to issue purchase orders or to bind the Government in contracts for purchases. These things will continue to be done by the respective Federal departments.

The order of delivery of military and naval material, both domestic and foreign, as provided under existing contracts will not be disturbed, unless absolutely necessary to meet requirements which may develop. The board will fully recognize the importance of early and prompt delivery of material under contract, or subsequently to be ordered, for shipment abroad to belligerents friendly to the United States.

While the mission of the newly created board is a broad one, and while its activities necessarily cover a wide field, its general and immediate purpose will be to assure the effective and immediate coordination and use of the resources of the country for the equipping and arming of the forces called into service, with the least
6 possible interference with normal industry throughout the nation.

The following statement was made by Chairman Scott:

Notwithstanding the great efficiency of the army and navy and the tremendous efforts of the officers and personnel of both branches to meet the vast demands of the existing situation, the difficulties that the board will have to encounter are very great. These difficulties are, however, such as are naturally inherent in our position as a nonmilitary nation forced into war. That the difficulties will be overcome is not doubted by any who have witnessed the spontaneous outpouring of patriotic enthusiasm of all classes, or who have observed that in the case of manufacturers and business men generally, this feeling is already making itself evident in practical ways in support of the Government.

7 Minutes of the Purchasing Board of the Council of National Defense, held in the Munsey Building on April 3, 1917, at 8 a. m. o'clock

The following were present: Julius Rosenwald; Charles Eiseman; Capt. A. B. Barber; Dr. R. C. Holcomb; Comdr. T. A. Kearney; Comdr. H. R. Leigh; Paymaster J. M. Hancock; L. L. Summers; Paymaster Peebles; Lt. Col. W. B. Lemly; H. H. Rousseau; Lt. Col. Hoffer; Dr. Simpson; Howard E. Coffin; W. L. Capps, Chief Construction, U. S. N.; Louis McH. Howe; Major Palmer E. Pierce, U. S. A.; F. A. Scott, Chairman.

The Chairman read a memorandum of the minutes of the Council of National Defense, indicating the purpose and composition of this Committee, and then opened the meeting for general discussion.

It was suggested that urgent needs of the Army and Navy be indicated at the present time in their own order of precedence. The Chairman advised that this was just the plan provided for by the Council, to take the larger items first.

Mr. Howe spoke of the possibility of arrangements being made between the Army and Navy so that industrial concerns would be continued in their special activities. Those manufacturing for the Army to continue to do so and those for the Navy to do likewise.

Paymaster Peebles spoke of the mass of work of the Purchasing Departments and the Chairman suggested that the Council desired to avoid building up of new systems to parallel the present splendid organizations in the various departments. He stated that the
8 best way was to expand the existing systems rather than create new departments, and that if this policy failed the Council might then find it necessary to replace it by a new department.

Mr. Coffin then spoke, stating:

> We have seen the peace-time machinery of foreign governments break down and a new order of things come. We hope to avoid that by acting on their experience. We have efficient activities in all lines. We lack coordinating influence; that is what we hope now to supply in order to keep present activities going and to strengthen them. This Board is to strengthen and supplement by giving the existing order the benefit of civilian experience. Army, Navy, and Industry must all be partners in war. Precedents and practice in many ways must go by the boards. New things must be done in a new way. It is possible for the whole industrial machine to be wrecked without proper and efficient coordination under the Act of June 3. So we must proceed sanely, carefully, and intelligently. We must avoid breaking down the industrial situation, as it is easy to rush in and get all supplies, thus breaking industry, or by careful analysis to adjust the demands so as to have an intelligent adjustment. Taking the motor-car industry as an example, suppose there were an insufficient supply of oil and gasoline. An announcement that a shortage existed would shock the whole world industrially, and industrially would result in a stampede and secret storage would result.
>
> On the other hand, if we make estimates of demand and supply, the whole thing would be adjusted in a few months. Supplies will be the most delicately adjustable problem because of the close relation of needs of war and peace.

Paymaster Hancock stated, in a general way, existing facilities should be expanded in an orderly way. He pointed out that twenty years have developed coordinating plans for the needs of the
9 whole Navy and that the needs of all navy yards are combined. He asked, however, what was in mind regarding the clearing and comparison of purchases.

The Chairman stated that this subject must be approached carefully, and that if it needed to have a clearing house for all governmental purchases, it would be done, but probably would not be needed.

Paymaster Hancock inquired whether the chair wished to take specific lists in the order of importance, and was advised in the affirmative, and then to take them in relation to the whole.

Colonel Pierce advised that at the War College plans had been formed on paper of forming an army of from one-half a million to four million men. The problem is therefore great and it is absolutely necessary for the general staff to know certain things before it can advise the authorities definitely as to the number of men that should be called. The principle needs are clothing, food, and shelter. This England did not consider and suffered greatly because of her lack of foresight. How many can be clothed, how many sheltered, and the amount of time necessary to arrange for this in case Congress raises the army to half million men is the serious problem.

Colonel Pierce stated that the maximum development possible without arms would be reached in three months after the call to the colors and that without equipment the men would be dissatisfied. He asked that this Board be advised when the men would be called.

Colonel Hoffer stated that the various Departments of War secure their own supplies and have no need for coordination except in a small way. The conflicting interest would come only from the Navy. The War Department is handicapped by lack of manufacturing facilities on account of orders in this country from foreign governments. Mr. Rosenwald asked what articles he had reference
10 to and was advised that they were mobile cannons and carriages, infantry small-arms, and machine guns. He further stated that a short time ago a joint board met and approved the needs for the two services.

The time consumed in the building of plants was touched upon and it was stated that the Government would see to equipping plants, but that it was better to expand the equipment of existing plants rather than build new ones.

The Chairman stated that this country can become very busy and equip itself quickly if existing plants are fully utilized. The question of raw materials appeared to him to be the important thing.

Mr. Summers then spoke, stating that he was not familiar with plans earlier than one week ago, but that he knew that a blanket order had been arranged for copper at an advantageous price.

Attention was further called to the fact that the failure to adopt new designs was due to lack of experience with large guns. In 1905 Vickers designed a 9.2 Howitzer, and after the war broke out changes in designs and guns came rapidly.

England experienced difficulty in getting even detonators so as to get whole explosions at once. Changes were then made in the ingredients of explosives.

Mr. Summers pointed out that we now have splendid smokeless powder supplies if the allies gradually reduce their demands, mentioning the DuPont works in this connection.

Attention was also called to the fact that our coke ovens were of German design and that all our byproduct ovens were wasting benzol and toluol; it was stated that in 1911 and 1913 in Ger-
11 many the Germans were not extracting either benzol or toluol, and that in this country since the war prices have become almost prohibitive, rising from 30¢ to $4.00 to $6.00 per gallon. The Chairman stated that it seemed best to get representatives of the producers who know these facts intimately and that he hoped this would be done not only in Mr. Summers' Department but also in his own.

Colonel Hoffer was asked to explain regarding the classes of material required by the Ordnance Department, and advised that the projectile supply was ample and sufficient. High-explosive and shrapnel shells could be had by the time men were ready for them. He advised that the need was for cannons and carriages and small arms. The Chairman asked Colonel Hoffer whether there is now a sufficient supply of nitrate in this country for present needs, and the Colonel responded that the supply is ample.

The Chairman asked whether the Board would authorize him to organize a committee on gun forgings, stating that if so, in from three to six days he could have full data regarding the facilities of the country.

On motion duly seconded, the appointment of such a committee was authorized.

Commander Kearney asked whether the Board should not determine what type of war we are to have, whether to plan for future battles by our own land and naval forces, or the immediate supply and financing of Europe. If war is to be essentially naval, then precedence should be given to the Navy; if an invasion is contemplated, then to the Army.

Commander Kearney asked that some higher board define this point so that facilities may be provided, pointing out first,
12 that such knowledge was essential to intelligent action; second, that some action was needed to maintain the industrial status quo which involved a plan to serve industrial organizations. This point the Chairman asked to be especially noted in the minutes, and all agreed that it was fundamental. The Chairman agreed to submit the question to the Chairman of the Council of National Defense.

Third, that the existing order of contracts be affirmed so that the country should not get the impression that this Board would upset existing order of things.

Fourth, that some plan be devised making operative the joint prorating or assigning of certain industrial facilities. Anticipating the probability of war, the Bureau of Ordnance of the Navy and the Ordnance Department of the Army had organized a Board and prorated the capacity of makers of powder, shells, and explosives, which had been approved by both secretaries. It was further suggested that the report of that Board be affirmed as it stands, and Colonel Hoffer was directed to present same.

Fifth, the precedence of allies' contracts should be considered. If it is our mission to be aggressive, our contracts should have precedence. If it is to aid the allied governments, then theirs should be first.

Sixth. Have we the right to attempt to control any attempt to create corners. Are we acting under the law of June 3, 1916? This last question was answered in the affirmative by the Chairman, who stated that the Board would act under Sec. 120 as long as they were backed up by the Departments. The Chairman further called attention to the fact that the President had stated that we should help the allies.

13 It was asked whether anything was being done to learn of the foreign needs of precedence, which the Chairman agreed was highly desirable and regarding which Colonel Hoffer stated the Ordnance Department had endeavored to get such information. The chairman advised that the Council of National Defense had information that the allies had notified manufacturers that contracts would expire April 1st and June 1st, and further orders would not be given, the allies' principal need being in raw material. Colonel Hoffer stated herein that the foreign governments were trying to renew orders for gun forgings and carriages.

Mr. Eiseman referred to the statement made by Colonel Pierce of the War College that the General Staff is working on a theory of increasing the army to one million within one year, one-half to be called promptly and the balance later. Mr. Eiseman stated that Mr. Roenwald's Committee would be able to arrange for food and clothing in ample time for that number of men, that it would take five months for the first half and less than one year for the balance.

The Chairman reported that the small-arms program had been O. K. by the Secretary of War and by General Crozier, and that he knew positively that arms could be supplied more promptly than the necessity demanded. He pointed out, however, that machine guns had not been taken care of and that this question must be taken up today.

It was asked whether the Board had data regarding facilities for forgings, etc. Reply was made to the effect that within the last three weeks the Navy Department had come in contact with all agencies and found that while some concerns believe that they can produce 4.7″ guns and know that they can produce 3″ guns, there are very few who can make the higher calibre, and that they
14 believe there are only two who can make the bigger sizes.

It was asked whether it was worth the while of the Board to consider the matter of taking up new manufacturing organizations and have them procure equipment and experience so that they could produce the larger size. Attention was also called to the necessity of shafting for higher-speed machinery which should be carefully considered.

The Chairman asked whether he might appoint Mr. Chester C. Bolton to act as Secretary of this Committee, which action, upon motion duly seconded, was approved;

It was suggested that a committee draft up plans of procedure and present them at tomorrow morning's meeting, which plan is to be in accordance with the President's address and emphasizing the fact that this Board's intention was not to upset industry but to coordinate.

The Chairman asked that the five senior officers present do this.

The Board was advised that the Federal Trade Commission had presented a plan covering purchase on a cost-plus basis for the consideration of the Council, which plan will come to the Board when crystallized.

Mr. Summers suggested that the Raw Materials Committee be informed as to what raw materials would be needed first, pointing out that the Government must come to the assistance of the manufacturers in supplying these, and mentioning that embargoes existed to a certain extent on important needed articles which might be raised and in which the French Government would reciprocate, as they were in great need of certain articles.

The chairman asked Mr. Summers to hold a meeting on this subject at once and report to this Board the exact facts regarding needed raw material, after taking this matter up with the Ordnance
15 Department and the Bureau of Ordnance.

Mr. Summers stated that no provisions had been made in this country for the creating of facilities for loading large shells.

The Chairman stated that he would ask General James A. Drain to report on loading facilities for shells here. Mr. Summers also reported that the raw material for detonators was a serious question. This was also referred to General Drain.

The importance of sulphuric acid was discussed and Mr. Summers was instructed to have a strong committee on this subject report within a few days.

The question was raised whether the Supply Departments should act as intermediatories between the manufacturers and the sources

of supply, and it was decided that such should not be the case, but that if the manufacturers found themselves in trouble they should ask for aid.

Mr. Summers pointed out that in England the Government bought raw material for reserve supply and that such work should be done direct by the Government and not through middlemen. It was further pointed out that the heads of companies should be conferred with only and have preference given urgent orders.

The Chairman advised that he would have charts of committees and subcommittees prepared.

Mr. Summers, speaking for Mr. Baruch's Committee, stated that this presumably will be permanent.

The Chairman presented an outline of the plan suggested, which is appended herewith, and is to be considered a part of these minutes.

16 It was suggested that the Chairman confer with the Secretary of War and request him to call upon the Secretary of State, asking him to get from the Embassies of the Allies an opportunity to obtain information regarding the needs for further manufactured materials from this country.

It was also stated that the manufacture of war vessels for the Allies will be doubtless permissible and that we should provide for that possibility.

It was agreed that all matters to be taken up should be in writing.

The question of labor and hours was brought before the meeting, and the chairman advised this matter was now in the hands of Mr. Coffin and Mr. Gompers. They were considering the keeping of skilled workers out of the army, of keeping them in one plant, and how it was best to arrange this. The Chairman stated it might be necessary to suggest a plan.

Dr. Holcomb and Colonel Peeble were requested to report tomorrow relative to the medical work and plans of the army and navy.

It was decided that the minutes were to be as one set for the present for confidential requirements only.

It was ordered that the three senior officers of the Navy were to make note of the essentials brought forth in the meeting relating to the Navy's needs and to report in concrete form. It was requested that the order of procedure be decided by the Naval Departments among themselves, involving the different classes of vessels required, etc. The chairman asked that such things be rated in the order of precedence for the conference tomorrow morning.

17 It was requested that the Departments be asked to classify their needs for action, giving in general the needs in the order of their importance. This reference to deal with relatively essential needs.

Colonel Hoffer asked whether the equipment of the Army and Navy was to go forward at equal speed or whether one is to have precedence. The Chairman advised this could not be decided at that time but that he would take it up with the Council of National Defense.

Meeting adjourned at 10:45 a. m., having developed the following points:

1. Fundamental governing principles should be deferred.

2. No industrial upheavals will be considered at this time.
3. The Allies should be given an opportunity to present their needs for coordination.
4. Skilled men should be encouraged to stay in industrial plants from a patriotic measure.
5. Military materials should be given consideration as well as ocean transportation and the manufacture of ships for this purpose.

F. F. SIMPSON,
Secretary Pro. Tem.

18 Minutes of the Munitions Board of the Council of National Defense held Wednesday, April 4, 1917, at 8 a. m., in the Munsey Building

The following were present: Dr. R. C. Holcomb; Comdr. T. A. Kearney; Comdr. R. H. Leigh; Paymaster J. M. Hancock; Lt. Colonel W. B. Lemly; Admiral H. H. Rousseau; Lt. Col. Hoffer; Admiral W. L. Capps; Major P. E. Pierce; Dr. Simpson; Mr. L. L. Summers; Mr. F. A. Scott; Major Wallace; Col. Hodgson; General Kruse; and Colonel Fisher. Mr. F. A. Scott presided.

The reading of the minutes of the previous meeting was dispensed with and the Chairman called upon the following, in order, to speak briefly relative to the urgent needs of their various Departments, i. e.:

Dr. Simpson, who outlined the policy of the Medical societies and spoke of the cooperations of the manufacturers of drugs;

Colonel Fisher, who spoke on the matter of blankets, also of litters, stating that 40,000 of these were necessary and that the principal delay was due to the difficulty in obtaining iron, wood, canvas, and belting to produce them. He also pointed out the need for mosquito bars, instruments, and special containers, all of which were very urgent;

Dr. Holcomb, who dealt principally with drugs as needed by the Navy;

Major Wallace, who spoke for the Signal Corps and stated that there were sufficient apparatus on hand in case the army is enlarged to one million men. Major Wallace mentioned particularly the

19 matter of motor transportation, which item apparently overlapped with other Departments, and which the Chairman stated would be taken care of by a special committee.

In connection with the radio apparatus for the Signal Corps it was pointed out that both the Signal Corps and the Navy Departments were endeavoring to standardize this equipment.

The Chairman also reported with reference to procuring linen, stating that General Squire asked that adjustments be made with England to lift the embargo so as to secure linen in large quantities.

General Kruse spoke of the Quartermaster's Department, laying particular stress on the financial difficulties of his department at the present time and asking that his department be aided as promptly as possible by proper appropriation. The need of raw materials, such as steel, cotton, and wool, was pointed out by General Kruse and it was stated by him that orders had been placed for blankets that would enable his department to take care of at least 500,000 men with two blankets each.

The Chairman then reported in reply to the question brought up by Comdr. Kearney on Wednesday, first, with reference to asking some higher board relative to the type of war to be pursued and whether preference was to be given to the Army or Navy. He stated that he had learned from Secretary Baker that when the needs of the Navy were immediate preference was to be given to that Department.

Second, relative to Committee on gun forgings the Chairman stated that he had learned that Mr. Crowell, of Cleveland, would be in Washington today to take up this matter.

20 Third, that the Committee appointed to draft a plan of procedure and present such draft would do so through Admiral Capps.

Fourth, that General Drain had submitted a report with reference to loading facilities for large caliber shells which report was thereupon read by the Secretary and accepted.

Fifth, that the Secretary of War had advised the Chairman that he would report to him in a day or so regarding the allies' plans for manufacturing facilities in this country.

Admiral Capps was then asked to present the draft of plan of procedure referred to above. On motion duly seconded the plan as submitted was approved and made a part of this record. (See pages 2 and 3 of this Minute Book.)

The Chairman then stated that he believed this draft, with the exception of the last paragraph, should go to the Council of National Defense to be given such publicity as was desired, stating further that the personnel of this Board would probably not be announced.

Reports were requested from the Departments of both the army and the Navy relative to their needs, and the Secretary was requested to tabulate this information according to industry and report to the Committee at tomorrow's meeting.

Mr. Summers spoke of the steel situation, mentioning the committee in charge of this work under the Chairmanship of Judge Gary, advising that the Committee on alloy steel had not as yet been definitely appointed. The question of specifications was commented on in connection with the steel situation.

The Chairman advised that he had discussed the matter of machine guns, upon which he had been asked to report, with the Ordnance Department and learned that General Crozier was giving this matter his attention and would probably report definitely on same tonight.

21 Colonel Lemly spoke regarding the Marine Corps, and the matter of hospital supplies, chemicals, etc., was also touched upon.

Colonel Pierce brought up the matter of motor transportation, stating that trucks could be procured at the rate of about 5,000 per month but that no definite data was available at this time as to the actual requirements of an army of one million men, although probably forty thousand trucks would be the maximum amount. It was pointed out that trucks would be bought for all Departments through the Quartermaster's Department. Colonel Pierce also advised that there would be no conflict between the Army and Navy Departments on motor transportation as the Committee was working on this matter at the present time both as to standardizing and coordinating same.

Dr. Simpson called attention to the fact that approximately all of the Departments of the Army and Navy in the bureaus in Washington were largely undermanned, and he was requested by the Chairman to bring this matter to the attention of Dr. Martin, of the Council of National Defense, and the chairman stated he would call Mr. Coffin's attention to the subject.

The Chairman suggested that the subjects dealt with could be handled for the different departments by properly designated persons instead of the entire number of the Board being present at each meeting, and stated that if agreeable to the members within the next day or so he would ask each Department to appoint its representatives to attend the meetings. This question of reducing the number of the Board to a few members for daily meetings and holding meetings of all the members once a week met with approval, and it

22 was pointed out by Colonel Hoffer and others that one or two representatives acting for the army and one or two for the navy might greatly facilitate the work of the Board. The Chairman requested the members of the various departments to consider this matter and stated that he would discuss it with the Secretary of War. He called particular attention to the fact that the membership of the Board was definitely fixed by appointment but the principal thing was to expedite the necessary work.

The Chairman was asked whether anything definite had been decided on the recommendation as to the manner of making purchases, and he reported that a recommendation from the Federal Trade Commission had been delivered to the Council of National Defense yesterday on the cost-plus-percentage plan, but as yet had not been acted upon. It was the opinion of the Board that this matter should be decided at once.

Reports were presented by the following departments showing the particular needs of each, which reports were accepted and ordered filed after the various items had been properly noted and made a part of the report to be presented to the Committee as stated above, i. e., from the Signal Corps Department; Bureau of Yards and Docks Engineers' Department, War; Bureau of Supplies and Accounts; Ordnance Department of the Army; Medical Department of the Navy; Bureau of Steam Engineering, Navy Department; Bureau of Ordnance, Navy Department.

The meeting adjourned at 10 a. m.

CHESTER C. BOLTON, *Secretary.*

23 Minutes of Meeting of the Munitions Board of the Council of National Defense held Thursday, April 5, 1917, in the Munsey Building

There were present: Admiral Capps; Admiral Rousseau; General Cruse; Dr. Holcomb; Comd. Kearney; Comd. Leigh; Paymaster Hancock; Lt. Col. Lemly; Lt. Col. Hoffer; Major Pierce; Dr. Simpson; Mr. Summers; Mr. Scott; Major Wallace; Col. Hodgson; Col. Fisher; Capt. Barker; Mr. Howe; and Mr. Bolton; Mr. Scott presiding.

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The reading of the minutes of the previous meeting was dispensed with.

Facilities for loading large-calibre high-explosive shells.—The Chairman proceeded to comment on the report presented at yesterday's meeting regarding the facilities for loading large-calibre high-explosive shells. After the discussion it was pointed out by representatives of the Ordnance Department and Bureau of Ordnance that while there was some doubt as to there being sufficient loading facilities in private plants in this country to furnish the proper number of projectiles required, the board need feel no concern on this score as the seacoast projectiles were the most important at this time and it was customary to have these loaded by the troops at the forts and not at the different plants.

It was further stated that if the army found it necessary to use 8″ projectiles for British calibre, these could be loaded at the various plants as has been done for the British Government.

24 *Lack of Personnel in the Army and Navy Bureaus.*—The matter of lack of personnel in the different departments as referred to by Dr. Simpson in yesterday's meeting was commented on; and the Chairman stated that if the Departments would report as to their various needs, after first going into the matter carefully, the Council would be glad to consider this matter at once with a view to obtaining relief.

In the discussion it was developed that draftsmen were most needed. In connection with this, Colonel Pierce commented on certain restrictions under present laws which prevented the Departments of the Army from availing themselves of the services of certain officers, who were not in position to act because of the so-called "Manchu law" and similar legislation, stating that while it had been attempted, it had not been possible to remedy this condition by legislation.

The Departments were requested to give the Council memorandum on such conditions if any action was desired.

Material urgently required by various Departments.—The Chairman then reported on the requirements of the various Departments from a report compiled from memoranda presented by the various departments and stated that the matter of forgings was at present in the hands of Mr. Crowell, who would be able to report thereon within the next few days, and that the matter of pressed-steel work would be turned over to Mr. B. P. Bole, of Cleveland, who has been asked by the chairman to study the question with leading manufacturers.

The Chairman suggested dividing the list into subjects involving the largest quantities required and further stated that Mr. Summers would take care of the raw materials necessary.

25 *General subject of transportation.*—General Kruse reported on motor transportation, which report was accepted and has been appended herewith as part of these minutes.

The report was commented on, and it was stated that Colonel Baker had the matter of transportation in hand, knowing the capacity of the manufacturers throughout the country and having been in close touch with them.

It was further developed that Colonel Rice, of the Ordnance Department, had been studying the armoured-car situation. The Chairman suggested that a committee be formed, composed of Colonel Baker, Colonel Rice, and himself, to study the motor-transportation situation and report to the Board, which action was authorized.

In response to the questions on the situation pertaining to horses and mules, General Kruse stated that in his estimation there would be sufficient supply in this country for an army of one million men. This would call for approximately 290,000 horses and mules, and the necessary arrangements have been made for purchasing and examining this number.

Raw Material.—Mr. Summers reported that the situation regarding alloy steels was the most unsatisfactory and that no committee had been appointed on the subject as yet, although such action was hoped for within the next few days.

Mr. Summers stated that the raw materials committee was handling all steels, also copper, spelter, brass, and oil.

The mica situation was discussed, particularly for use in
26 wireless, and a committee composed of Mr. Summers, Major Wallace, and Captain Leigh was appointed to take charge of this commodity.

The Chairman requested the various Departments to submit to this Committee any complaints from manufacturers as to lack of raw materials.

It was further developed that it was rather difficult to procure boiler tubes for naval requirements, and the Secretary was requested to get a specific report on this subject from Admiral Capps' Department and report at the meeting tomorrow.

Of the commodities required, forgings for gun carriages, etc., and the conversion into finished guns, appeared to be the most important. The subject of copper and brass was also discussed, and Mr. Summers advised that a committee on brass had been appointed, who at present were working on the matter of cost.

Mr. Summers further stated that brass could probably be secured promptly and efficiently and stated that while copper was the only thing definitely settled, the question of spelter would probably be complete this week. This matter was discussed from the standpoint of both the Army and the Navy Departments, and Mr. Summers was requested to work out a plan incorporating the questions raised by the Ordnance Department in a letter addressed to the Council, under date of April 4th, and also the form which the Bureau of Supplies and Accounts was using in requesting bids.

A detailed statement of the copper matter, combining all the points noted above, was requested to be prepared by the Secretary.

The Chairman appointed a committee consisting of Mr.
27 Summers, Paymaster Hancock and Colonel Hoffer, to discuss this situation and to work out all details pertaining to estimates from manufacturers, a report on which is to be submitted by this Committee to the Secretary.

Machine Guns.—The Chairman stated that Chief of Ordnance had reported to him that this subject was so well in hand that the matter could be dropped by the Board for consideration for the time being. The production of the necessary number of machine guns will begin

in June and the program for the necessary number completed in September. The number contemplated at present is 17,000.

Daily Meetings.—The Chairman presented the matter of reducing the number of the Board to few members for daily meetings, as was suggested in yesterday's meeting, and asked the different departments of the Navy and Army for their representatives.

The Navy Departments, including the Marine Corps, requested Paymaster Hancock to act as their representative; the Army Departments, including the Aeronautics Corps, requested Colonel Pierce to act for them. It was decided that these two representatives, together with the Chairman and Secretary and such civilian members whose duties make their presence essential, should meet daily at 8:15 a. m., and the general committee, as originally appointed, to meet at 9 a. m. on Tuesday of each week, subject to special calls as the Chairman may deem necessary.

Dr. Holcomb suggested that each member of the Board report to the Board any changes that might be suggested as to legislation which conflicts or hampers efficiency in any of the Departments.

The meeting adjourned at 9:15 a. m.

CHESTER C. BOLTON, *Sec'y.*

28 The following motor trucks are now owned by the Quartermaster Corps:

Delivery	67
1½-ton	1,530
3-ton	1,191
5-ton	6

In addition to the foregoing trucks, the Quartermaster Corps will require for an Army of 1,000,000 men the following motor transportation:

4,210 Automobiles, 5-passenger.
1,310 " roadsters.
29,730 Trucks, cargo: 14,865, 1½-ton; 14,865, 3-ton.
1,090 " repair and kitchen, 1½-ton.
2,180 " oil and gasoline, 3-ton.
110 cars, wrecking and mess } auto chassis.
110 " repair and mess }
3,670 Motorcycles.

The Ordnance Department reports that they will require the following:

845 Tractors for 9.5" Howitzers.
891 Ammunition trucks for 9.5" Howitzers, 3-ton.
408 2-ton trucks for 3" Anti-Aircraft gun and mount.
1,428 2-ton trucks for ammunition for 3" Anti-Aircraft gun and mount.
173 Armored cars (probably heavy touring-car chassis).
4,000 1½-ton trucks for machine guns.

The Signal Corps reports that they will require the following:

2,225 1½-ton trucks.

The Medical Department reports that they will require the following:

1,500 1-ton trucks.

29 Concerning the statement by the Medical Department that they desire the 1-ton truck, it is proper to state that this matter was taken up personally with the Medical Department with a view to ascertaining whether or not they could use the 1½-ton truck. They adhere, however to their original statement that they desire the 1-ton truck.

THOMAS CRUSE,
Brigadier General, Quartermaster Corps.

30 Minutes of Meeting of the Munitions Board of the Council of National Defense held Friday, April 6, 1917, at 8:15 a. m., Munsey Building

There were present: Major Pierce; Paymaster Hancock; Dr. Simpson; Mr. Summers; Mr. Scott; and Mr. Bolton, Secretary; Mr. Scott presiding.

The reading of the minutes of the previous meeting was dispensed with.

Communication from the Ordnance Department.—The Secretary read a letter from Colonel Babbitt of the Ordnance Department, April 3, addressed to the Council of National Defense, setting forth a list of material on which estimates were about to be asked from individual manufacturers, and regarding which the Council of National Defense was requested to advise whether it had any suggestions to offer relative to the policy to be pursued, not only in requesting bids but also in placing orders for this material.

This matter was discussed at some length, during which Colonel Pierce presented arguments for the development of plants and arsenals west of the Allegheny Mountains and east of the Sierra Nevadas, and 200 miles inland from the northern and southern borders, calling attention to the fact that all of the important munition plants were located very close to the eastern border at present.

31 Colonel Pierce stated that the Chief of Ordnance had been asked to try to develop such facilities and that this policy was part of the War Department program.

It was further pointed out that the Government was losing the benefit of plants and facilities that had been developed in the past two years in this desired territory due to the lack of orders. During the discussion the matter of big guns was mentioned and the Chairman advised that Mr. Crowell's report on this situation would be presented in a day or so.

It was shown that speed and efficiency were requirements most essential in government specifications at this time and several ways were suggested with a view to overcoming the present handicap caused by lack of experienced plants in the manufacture of heavy ordnance.

The matter was disposed of by instructing the Chairman to confer with Colonel Hoffer of the Ordnance Department and to settle the question along the lines suggested in this discussion with the thought of continuing existing plants, particularly those located some distance from the coast, this policy to apply to all articles necessary for the manufacture of munitions.

It was further agreed on the specific lot of shells mentioned in Colonel Babbitts letter that it would be best to have a maximum price decided upon to avoid any possible criticism of the Department at some later date.

32 *Letter from Bethlehem Steel Company pertaining to governmental orders.*—The Secretary read a letter received from the Bethlehem Steel Company under date of April 4th, regarding the precedence of orders which that company had received from the vari-

ous arsenals, the Navy and War Departments, requesting that such information be given which would not only be of much assistance to the Bethlehem Steel Company but of great advantage to the various departments of the Government. This matter showed very clearly the necessity of coordination, and after some discussion was referred to the Secretary for attention.

Centralization of purchases.—The matter of centralizing purchases made for the Government, instead of the various arsenals and Departments procuring their own requirements separately, was discussed, and Colonel Pierce, acting for the Departments of the Army, was asked to present any suggestions he might obtain from the various officials to the Board as to modifications.

Report on surgical instruments.—A supplementary report of the Medical Department, under date of April 5th, pertaining to surgical instruments for base hospitals, was presented and Dr. Simpson was requested to meet with the leading manufacturers of surgical instruments and ascertain from them what conditions actually were relative to the production of instruments.

Dr. Simpson further reported that plans for increasing manufacturing facilities in this line were to be considered and a meeting to be held tomorrow of a committee of manufacturers.

33 *Boiler Tubes.*—A report was presented from the Secretary with reference to the difficulty in procuring boiler tubes for naval requirements, as shown at Thursday's meeting. The report pointed out, after further investigation, that it was not necessary for the Board to concern itself with this matter at the present time.

Motor Transportation.—The Chairman reported that he had studied the matter of motor transportation with Colonel Baker and Colonel Rice yesterday, and found that the Quartermaster's Department was dealing directly with motor manufacturers in groups, endeavoring to place orders with reference to production and locality.

The Chairman reported that the Quartermaster's Department was not handling ammunition trucks, tractors for Howitzers, or armoured cars, but Colonel Rice of the Ordnance Department had this matter in charge and was conferring today with a number of the manufacturers regarding this subject.

Communication on Nickle.—The Chairman read a letter received from Mr. Monell, under date of March 28th, regarding the nickle situation, and particularly with reference to the plant of the ————, and further read a copy of a letter addressed to the Secretary of War by Mr. Monell.

The refining of nickle and the nickle situation in general was commented on and the matter referred to Mr. Summers for report.

The meeting adjourned at 10 a. m.

CHESTER C. BOLTON, *Secretary.*

34 Minutes of Meeting of the Munitions Board of the Council of National Defense held Saturday, April 7, 1916, at 8: 15 a. m., Munsey Building

There were present: Colonel Pierce; Paymaster Hancock; Mr. Eiseman; Dr. Simpson; Mr. Rosenwald; Mr. Scott; and Mr. Bolton, Secretary; Mr. Scott presiding.

The reading of the minutes of the previous meeting was dispensed with.

Communication from the Ordnance Department pertaining to the combined needs of the War and Navy Departments for cotton fabrics and leather.

The Secretary read a letter addressed to the Munitions Board of the Council of National Defense under date of April 6th, from Brigadier General Crozier inviting attention to the necessity of determining immediately the combined needs of both the War and Navy Departments of cotton and leather of various grades, in order that the capacity of the cotton mills and tanneries may be intelligently proportioned and that a uniform practice on the part of the Departments in transacting business with the mills and tanneries might be conformed to, suggesting that arrangements be made whereby raw materials of the various mills and tanneries for Government requirements may be released only upon orders of the purchasing departments for delivery to the various establishments making the finished products.

35 Continuation of communication:

Report on purchase of wool, cotton, and leather.—Mr. Eiseman spoke of the work of Mr. Rosenwald's Committee in arranging for the purchase of wool, cotton, and leather, advising that the cotton looms necessary for making materials required by the Government had already been corralled and the prices arranged for.

Mr. Eiseman stated that he was experiencing most difficulty with producers of raw cotton, but planned to have a meeting with representatives of that industry early next week and have the matter of price and supply definitely fixed.

He further reported that this committee had also been handling the leather situation, having fixed prices on both raw material and shoes, but that the apportionment of tannery facilities necessary to artillery requirements, etc., had not been discussed.

Mr. Eiseman stated that the next work of his committee was to make it practical for the various departments of the Army and Navy, but the question as to whether the board has the power to stop any purchases that interfered with the coordinating of the buying of the several departments of the government was raised. This was not definitely understood by Mr. Eiseman's committee, and a letter from the Chairman of the cotton-goods industry was presented to illustrate his point.

The Chairman stated that he understood that plenary authority had been given by the Council of National Defense to this Board in coordinating the purchasing and that lack of proper appropriations at the present time was the only difficulty encountered by the several departments in actually placing orders.

36 To answer the question the Chairman quoted the authority given this Board as outlined in the minutes of a meeting of the Council of National Defense held on March 31st, as follows:

Resolved, That the Secretary of War, as Chairman of the Council of National Defense and under authority of the Act of August 20, 1916, "For the coordination of industries and resources for the national security and welfare", and under the specific authority in the Act, which provides for the appointment of "Subordinate bodies", shall appoint a Purchasing Board, Council of National

Defense, to be composed of Army and Navy Department heads or officers appointed by them and representatives appointed by the Advisory Commission, the purpose being to coordinate the buying of the several Departments; assist in the acquirement of raw materials and manufacturing facilities; the establishing of precedence of orders, etc., including the ordinary commercial and industrial needs and the military requirements of the nation. Such committee shall have no authority at this time to issue purchase orders, make contracts, or bind the Government in its purchases; all these things to be done, as at present, by the respective departments. The Chairman of the Committee, however, shall have authority to require, when necessary, that certain (conflicting) purchases be not made until the same, with a full statement of the facts, have been submitted to the Secretary of War or Navy.

After the discussion of this matter, and further advices from Mr. Eisenman as to the methods being pursued by his committee at this time, and the results desired, principally in preventing fluctuation and the advancement of prices, and the centralizing of purchases, the Chairman requested Mr. Eisenman to call a meeting for Monday to discuss with Major Babbitt, of the Ordnance Department, and General Sharp, of the Quartermaster's Department, the question raised in the Ordnance Department letter of April 6th, above referred to.

In connection with this matter Mr. Rosenwald presented a telegram from a company offering its plant of 800 workers to the Government for the purpose of making all or any part of articles of wearing apparel, which communication was referred to Mr. Eisenman and Colonel Hodgson for attention.

37 *Report on copper.*—The Chairman presented a report with reference to furnishing contractors with raw materials, principally copper. This subject was referred to on Thursday and had been turned over to Mr. Summers to be considered in connection with Paymaster Hancock and Colonel Hoffer. The report was accepted and ordered filed.

Report of Small Arms Committee to the Munitions Standards Board.—The Chairman presented a report received from Mr. Otterson, Chairman of the Committee, to the Munitions Standards Board, which report dealt entirely with machine guns and which the Chairman advised had been transmitted to the Chief of the Ordnance Department, who had acted along the lines suggested. The Chairman advised that with such action the matter of small arms, revolvers, and machine guns had not been definitely settled.

Report on pressed-steel work manufacturers.—The Chairman presented a report from Mr. B. P. Bole to the effect that a meeting of the leading pressed-steel work manufacturers had been called for April 8th, at which time the entire situation relating to this industry would be discussed and an inventory of the facilities of the leading manufacturers in that industry taken.

Mobile artillery.—The Chairman advised that he expected to have a definite report on mobile artillery on Monday, April 9th, outlining some definite plan for obtaining an increased number of large calibre guns.

38 *Motor Trucks and Armoured Cars.*—The Chairman reported that a committee on motor trucks and armoured cars would meet in Washington on Tuesday, April 10th, at which time it is hoped definite plans can be formulated.

Precedence of Orders.—The Chairman referred to a letter from the Bethlehem Steel Company, presented to the Board yesterday,

asking for information as to the precedence to be given orders received from the different Departments of the Government, and in connection with this communication asked that an order be sent to all the Departments of the Army and Navy requesting the various bureaus to advise this Board of all or any immediate orders placed by the various Departments on which they were unable to procure satisfactory deliveries.

In this connection, the Chairman reported that the Peerless Motor Car Company had requested that operations at their factory be not disturbed at this time on account of foreign orders. This firm has been advised that the Government will not interfere with that work at the present time.

Lack of Personnel and Floor Space.—Major Pierce presented a memorandum received from Major Wallace, of the Signal Corps, calling attention to the fact that his Department would require 18,000 feet additional floor space outside the War Department. In connection with this the Chairman stated that this matter of increasing the personnel and floor space has been referred directly to the President and that plans at present were under consideration.

39 *Market price of mercury fulminate.*—The Chairman presented a letter received from Mr. Gifford enclosing a communication from General Crozier, relative to the price of mercury fulminate, which communication was referred to Mr. Summers for attention.

The meeting adjourned at 10 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

40 Minutes of Meeting of Munitions Board, Council of National Defense, held Monday, April 9, 1917, at 8:15 a. m., Munsey Building

There were present: General Smith; Major Pierce; Paymaster Hancock; Mr. Summers; Mr. Eisenman; Mr. Scott; and Mr. Bolton, Secretary; Mr. Scott presiding.

The reading of the minutes of the previous meeting was dispensed with.

Discussion of cooperation between Quartermaster's Department and the Munitions Board.—A discussion as to the exact functions of this Board with reference to articles purchased by the Quartermaster's Department was entered into. General Smith stated that this point was not clear to him and that neither he nor his Department understood exactly through whom contracts for articles should be placed, to whom of the Board questions should be asked pertaining to these articles, and to whom communications should be directed.

Gen. Smith pointed out that the mobilization of troops should not cause a greater demand for food and that while the Government should not pay less than current prices, it should not be expected to pay more. He stated that while each Department had the right under law to solve its own problems in this respect, he believes that this could be done more tactfully and properly by the Council.

Gen. Smith was of the opinion that there were sufficient supplies in this country such as wool and leather, etc., for the entire requirements of the army and navy, as now planned, provided civilians would accept substitutes for some of the articles necessary for the army, but that if these substitutes would not be accepted by
41 civilians the demands would, of course, cause a great advance in prices. He further stated that there was a question in his mind as to whether the Munitions Board had the power to regulate or assist in purchases, and if the latter, what was the medium through which the requests should come. He said he believed the principle assistance of the Board would be in the reduction of exorbitant prices.

The Chairman pointed out the fact that the various Departments might be seeking more goods than the country could supply and that these Departments, acting independently, might hinder other Departments by purchasing all the supplies required by another.

General Smith called attention to the fact that the Secretary of War had the power to order sufficient supplies of one department turned over to another in case of necessity.

It was shown that questions might be asked by the members of the Board, of the Quartermaster's Department, that would cause a considerable amount of work in the various depots which were at this time overworked.

The matter was finally dismissed with the understanding that Colonel Hodgson of the Quartermaster's Department would meet with the Committee every day and insofar as possible, relieve General Smith's Department of unnecessary questions and work.

It was further decided that the personnel and points of contact of the Munitions Board would be clearly set forth and explained to the various Departments so that there would be no misunderstanding in the future.

42 *Report on mobile artillery gun forgings.*—The Chairman presented a report written by Mr. Benedict Crowell pertaining to the manufacture of large-calibre guns, which report was accepted, and which the Chairman was requested to present to the Ordnance Department of the Army.

The meeting adjourned at 10 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

43 Minutes of Meeting of Munitions Board held on Tuesday, April 10, 1917, at 9 a. m. in the Munsey Building

There were present: General Thos. Cruse; Col. T. G. Hodgson; Col. H. Fisher; Lt. Col. J. E. Hoffer; Major P. E. Pierce; Major Chas. Wallace; Capt. A. B. Barber; Col. Dunn; Mr. L. L. Summers; Mr.. F. A. Scott; Mr. C. C. Bolton, Secretary; Mr. Julius Rosenwald; Rear Admiral H. H. Rousseau; Rear Admiral W. S. Capps; Commander R. H. Leigh; Commander T. A. Kearney; Dr. R. C. Holcomb; Paymaster J. H. Hancock; Lt. Col. W. B. Lemly; Mr. L. McH. Howe; Lt. Commander Gardner; Mr. Chas. Eisenman; Dr. Simpson. Mr. Scott presided.

In view of the fact that the minutes of the past meetings had not been read, the Chairman suggested this be done by a special committee and he appointed Major Pierce, Commander Kearney, and Mr. Summers as a committee to whom the minutes of the Board from April 3d to April 9th, inclusive, be read.

Appointment of officers by the Government to cooperate in purchases.—The Chairman announced that he had received a communication from the Secretary of War to the effect that the French Government had appointed an officer to cooperate with this committee in matters of purchases and supplies, that the Italian Government had nominated an officer, and that the English intended to do so in the near future.

Communication from Textile Alliance regarding wool.—The Chairman advised he had received a communication from the Textile Alliance calling attention to the fact that there was not sufficient wool in this country for the requirements of the Army
44 and Navy and for civilian needs. This matter was referred to Mr. Eisenman for attention, with the understanding that if necessary this Board would suggest to the Council that it arrange with the British Government to remove the embargo now existing on wool.

Extraction of Potash.—The Chairman presented a communication from Dr. Hale regarding the extraction of potash to be used in connection with production of munitions, which matter was referred to Mr. Summers for attention.

Pressed Steel Specifications.—The Chairman advised that the Committee called for the purpose of reviewing specifications regarding pressed steel work had met, but up to the present time had not been able to secure sufficient data from the various departments to show just what requirements for pressed-steel work were. This matter was referred to Colonel Dunn after it had been explained that the tremendous amount of work being done by the Departments at present prevented this information from being given out promptly.

Small Arms.—The Chairman referred to the report of the committee on small arms which had been submitted to the Ordnance Department, and advised that this subject had been referred back to that committee with a request to draft a contract suitable to use in connection with procuring one million rifles. The Chairman stated that this draft had been submitted to him by the Small Arms Committee, and to expedite matters he had taken the responsibility of submitting this draft to a local expert in the Government
45 service for criticism. The Chairman stated that as soon as this draft had been approved it would be submitted to the Ordnance Department.

Report on Pressed-Steel Work.—The Chairman presented a report received from Mr. Bole, Chairman of the committee appointed to act for the leading pressed-steel manufacturers of the country, advising that for the present it was impossible to report definitely on this situation due to lack of details. The report was ordered filed.

Big Guns and Forgings.—The Chairman presented a report received from Mr. Crowell regarding the manufacture of big guns and forgings, in which report was suggested a method to increase production. The Chairman advised that this matter was under discussion at the Ordnance Department at present and that a final report would be made after a conference, which was to be held in the near future.

Dies and Gauges.—The Chairman reported that a meeting of the gauge and die makers was to be held today in the House Office Building under the leadership of Mr. Pratt, Chairman of that subcommittee of the Munitions Standards Board, the purpose of the meeting being to try to determine a governmental policy on gauges.

The Chairman further advised that Representative Tilson, an expert and a member of the Military Committee, would meet with Mr. Pratt's Committee, and that it was hoped that this meeting would result in a larger appropriation for dies and gauges than was originally contemplated.

46 *Communication from the Federal Trades Commission suggesting the organization of a Costs Bureau.*—The Chairman presented a letter received from the Secretary of Navy, transmitting a communication from the Federal Trades Commission suggesting the organization of a Bureau to check costs, calling attention to the fact that this was part of the subject of fixing prices which this board would have to deal with in adjusting prices, but as it appeared too early to take action on this matter the communication was ordered to be acknowledged and the subject held in abeyance.

Communication from the Ordnance Department of April 6th, regarding the needs of the Army and Navy Departments of cotton fabrics and leather.—The Secretary read a letter received from the War Department sent by the Ordnance Department, under date of April 6th, regarding the above subject.

Mr. Eisenman stated that his committee was now ready to deal with this subject as the manufacturers of wool, leather, etc., had been pretty well organized and the problems raised by the Ordnance Department, he believed, could be properly adjusted.

Mr. Rosenwald spoke on this matter, commenting on the meetings which had been held by the various industries, such as cotton, wool, and leather, advising that the price of leather had been arranged for and that investigation on this subject had shown that there was sufficient leather in this country not only for the first allotment of soldiers but also to take care of the second and third number, as now contemplated.

47 In connection with this subject the Chairman called the attention of the meeting to a communication received from the Secretary of War, enclosing a communication from the Textile Alliance to the effect that if large orders for wool were to be placed, a large amount would have to be procured from the British Government who now had this commodity in embargo.

Mr. Eisenman advised that this matter would be discussed today at the meeting to be held by those connected with the woolen industry.

Lack of Deficiency appropriation for Quartermaster's Depot.—General Cruse called attention to the fact that as the deficiency appropriation had not been passed, his Department had been very much handicapped and embarrassed and asked for help on this matter. As this subject was to be acted upon in Congress within the next day or so, no steps were taken until the outcome of such action is learned.

Suggestion of some form of industrial reserve.—Commander Kearney spoke of the difficulty in having competent workmen continue their jobs, due to their desire to enlist, and asked whether some method could not be devised whereby this trouble could be avoided. Mr. Howe spoke of the necessity of keeping workmen from enlisting, stating that some steps should be taken to retain men in industrial service.

After some discussion pertaining to the industrial reserve and the complications caused by the labor situation, the Chairman asked Mr. Howe, in cooperation with some one whom he might choose in the War Department, to draft a joint communication to the Board on this subject, which could be presented to the Council for attention.

48 *Additional space for various departments of the Army and the Navy.*—Capt. Leigh asked that the subject of procuring additional space for the various Departments of the Army and Navy be seriously considered and stated that the difficulties under which the various departments were now operating.

General Cruse presented a memorandum regarding the renting of buildings in the District of Columbia and there was some discussion on this subject in which the urgency of prompt attention was shown.

The Chairman stated that he would address a communication to the Council stating that the entire munitions operations were in grave danger of breaking down unless additional space be granted the various departments.

In connection with this matter Capt. Barber pointed out that it was important to keep the various departments intact instead of scattering them in different buildings.

Time of weekly meetings.—It was suggested that the hour for the weekly meeting on Tuesday be reconsidered, and upon motion duly seconded it was decided that the hour be changed to 8:30 a. m.

The meeting adjourned at 10 o'clock.

CHESTER C. BOLTON, *Secretary.*

49 Minutes of Special Meeting of the General Munitions Board held Monday, April 9, 1917, at 4 p. m., in the Office of the Secretary of War

There were present Hon. Newton D. Baker, Secretary of War; Hon. W. M. Ingraham, Assistant Secretary; Gen. Enoch H. Crowder; Gen. William Crozier; Gen. Henry G. Sharpe; Gen. Thos. Cruse; Gen. Smith; Col. F. G. Hodgson; Major P. E. Pierce; Paymaster J. H. Hancock; Dr. Simpson; Mr. Scott; Mr. Summers; Mr. Bolton, Secretary; Mr. Chas. Eisenman. The Secretary of War presided.

The Secretary of War stated that the meeting had been called to determine just how far the Munitions Board had gone and to what degree it was ready to have the Purchasing Department of the Army cooperate with it. He stated that orders were about ready to be placed by the various Departments of the Army and that it was necessary to determine what action was desired.

In response, Mr. Scott commented on the element of conflict between the various Departments of the Army and Navy and his endeavor to coordinate their requirements. He stated that the Board was now ready to act with the Ordnance Department, Bureau of Ordnance, Bureau of Supplies and Accounts, and the Quartermaster's Department of the Army; that, however, there were a number of elements

affecting the civilian life over which the Board had no control and which must be decided by the Council or even the Cabinet.

These various elements would be submitted to the Council for consideration from time to time, but at present the Board was ready to act and cooperate with the various Departments to its fullest power.

50 Mr. Scott stated that subcommittees had been investigating in various fields, such as raw materials, textiles, etc., and were as ready to act now as they ever would be. He further stated that the existence of the Board seemed to him a necessity because of the need of cooperation and coordination and that it appeared wise from the standpoint of the country to have the various departments of the Army and Navy pass their requirements through the Board, as through a clearing house.

Mr. Scott further advised that the Board had a schedule of the needs of a million men in its possession and that the simplest way to avoid conflict in these requirements seemed for the various departments to make their needs known through the Board.

General Sharpe, in speaking of the relations of the Quartermaster's Department to the Committee, stated that he understood that it was not necessary to advertise at this time for bids, but that because of existing conditions the right was given to place orders as necessity demanded. He stated that he understood that the Ordnance Department had been acting with the Council of National Defense and the General Munitions Board in this matter, which, he understood, would apply to the other various departments, and suggested that the departments be instructed as to the Secretary of War's decision to act in this matter.

The Secretary of War advised that occasions might arise where the War Department would be obliged to buy at less advantageous prices than was customary, due to the desire to cooperate with the other departments, stating that the responsibility for doing this would be assumed by him.

51 General Smith next spoke on the question as to how far the Board should go, commenting on the difficulty of furnishing fuel, forage, and clothes through that body. He advised that in the Army it was impossible to tell very far in advance the kind or amount of supplies needed, which were furnished from time to time as the situation demanded, due to military necessities and changes.

General Smith dealt particularly on the difficulty of anticipating requirements intelligently, giving specific examples of the proper quantity of blankets and shoes, stating that if necessary to have all purchases go through a body of men such as the Munitions Board delays would be caused which would be most unfortunate and the subject of unfavorable comment, pointing out that it was necessary to procure stores in quantity and in time and that it was not possible in many cases to wait until prices had been submitted.

In reply to this the Secretary stated that the whole question was what the Board was to do when the Quartermaster's Department went to them, pointing out that if a study and investigation of the subject submitted was made in detail the purpose would, of course, be defeated, but if the Board had information at hand and advised promptly where and from whom supplies could be furnished, it would be highly desirable.

General Smith stated further that he believed it impossible to keep account of such supplies and spoke at length of the system in force at the different depots.

52 The Secretary of War pointed out that the entire discussion to date was based on the assumption that everything was ready, but that this was not so in the case of a million men, that it was not possible to keep everything in hand and that the producing functions must be considered.

The Secretary further stated that the functions of the Board were only to designate and cooperate in cases where it was necessary to learn where articles could be procured, that if the whole field of production of the country could be intelligently known to the Board and the requirements of the country foreseen, it would have a very useful function.

General Smith stated that manufacturers would not produce articles unless they knew such articles were actually wanted and would be ordered, commenting on the fact that the Quartermaster's Department could not estimate requirements accurately because of the changing conditions.

The Secretary stated that under present conditions such articles ceased to be commercial in the amounts that would be needed. The fact that articles would not be made and new facilities arranged for without specific orders was discussed at length, during which General Smith again advised that in his mind the principal aid of the Council would be in rendering assistance in case of exorbitant prices being named.

53 The Secretary commented on the undesirability of contracts being signed and prices later reduced, which to General Smith seemed necessary in order to facilitate matters in many instances.

The Secretary advised that it was not his wish to have any delay in procuring the necessary articles.

General Smith stated that in his opinion it was impossible to have two bodies doing this work. He believed it wiser to have only one body doing the purchasing and the other acting in support of that body helping to keep prices reduced.

General Sharpe stated that by the discussion the meeting was losing sight of the fact that the buying should be considered for a period of three years and not for one and that the buying should encourage quantity production.

General Smith stated that he did not believe the Government should speculate in buying huge amounts but that articles should be purchased in lots as necessity demanded instead of in big lots, again mentioning the fact that the articles required were constantly changing.

General Crozier commented on the fact that some Departments overlapped each other in the articles requested and stated that he believed the allotment of articles to the different departments would be wise and that someone should decide which department is mostly in need of the various articles.

Mr. Eisenman next spoke commenting on the splendid work which he had come in contact with in the last five or six weeks in both General Sharpe and General Smith's Departments.

54 He stated that one point of contact was missing, which was the central bureau, where the wants of the various departments

might be known and centered. He also stated that it was difficult to control prices, that the Board did not wish to buy for the Government but to aid it in buying by arranging satisfactory prices.

General Crozier stated that the Council should be informed as to the orders placed in order to intelligently keep in touch with industrial facilities.

The Secretary of War pointed out that the major purpose of the Council was because the country is facing a national emergency, that that being so, the Council should have all information possible, offering what it has to do particularly in buying, to keep in touch with the country's efficiency and output, and that in view of this some sort of clearing house as contemplated is necessary for efficiency.

Mr. Scott stated that he understood the responsibility of General Smith's Department fully but that there were elements which were not involved in that Department and which do not interfere with the functions of that Department, such items as those calling for supplies of the allies.

Supplies for that source as well as supplies for the Army could not all be handled by separate departments. Mr. Scott pointed out that the Council of National Defense was just as much a part of the Government as any Department, that 85% of the members of the General Munitions Board were Army and Navy officials, that the Chairman of the Council is the Secretary of War.

55 Mr. Scott further stated that many things would be required that were not purchasable in the market and which must be foreseen a long time in advance of requirements, and that somebody outside of the Army must arrange not only for civilian requirements but also military needs of war time.

Mr. Scott stated that he believed the Council in drafting the Munitions Board foresaw just such action not only of coordinating the needs of the Departments and establishing the precedence of the Allies but also of the Army and Navy and civil life.

After some further discussion, Secretary of War requested General Crowder to draft regulations instructing the various departments.

The meeting adjourned at 5:45 P. M.

——— ———, *Secretary.*

56 **Minutes of Meeting of the General Munitions Board held Wednesday, April 11, 1917, at 8:15 a. m., Munsey Building**

There were present Colonel Dunn; Major Pierce; Paymaster Hancock; Mr. Summers; Mr. Eisenman; Mr. Rosenwald; Mr. Scott; Mr. Bolton, Secretary. Mr. Scott presided.

The reading of the minutes of the previous meeting was dispensed with.

Supply of Wool.—The Chairman requested Mr. Rosenwald to advise regarding the conference held yesterday with the wool dealers. Mr. Rosenwald stated that the brokers in Boston, Philadelphia, and Chicago had agreed to hold such wool as they now had on hand for the use of the Government, and that a price equal to that in effect on April 2nd for raw wool had been decided upon.

Mr. Rosenwald stated that of the amount of wool now controlled only about 15 percent of it was suitable for use in accordance with Government specifications, and that this would go a very small way in taking care of the requirements demanded, and adding that approximately 56,000,000 pounds of scoured wool was necessary for a year's supply of a million men.

It was pointed out that in view of the scarcity that existed in

57 wool, the Government would have difficulty in getting a sufficient amount unless the general specifications pertaining to wool were considerably revised.

It was shown that if the Quartermaster's Department required a large amount of finished articles and at a fair price, the Government should acquire the raw wool, taking advantage of the offer made by the wool people, and distribute same to the manufacturers for finished articles.

The consensus of opinion was that the Government should make purchases of raw wool in bulk and distribute same to the manufacturers as outlined above, particularly in view of the fact that the wool people would become restless under the option given and that prices would be apt to advance considerably.

The question was raised as to what would be the result if the Government acted on the offer made and got the benefit of 50% of the wool on hand, whether the price of the balance of the wool obtainable would not be raised materially to manufacturers.

After Mr. Eiseman had presented some figures relative to the amount of woolen articles required and the amount already purchased by the Quartermaster's Department, Major Pierce was requested to talk with General Sharpe regarding the situation on wool, after getting definite figures from Mr. Rosenwald's committee. In connection with this subject, Paymaster Hancock advised that the Navy was endeavoring to procure some finished articles direct from England, which articles were made to the same requirements as those of the United States Navy, and which would relieve the situation considerable if such action was found possible.

58 Colonel Dunn further added that he believed the Government should decide to accept the wool under discussion as the brokers only have options on this quantity and they, of course, will not purchase it until they know orders will actually be placed for the amount involved. It was the consensus of opinion that this question should be decided this week and as promptly as possible in view of the disposition of the woolen men.

Report of conference with Bethlehem Steel Company Officials.—Mr. Scott advised the Board that he and Colonel Dunn had been in conference with Mr. Grace and Mr. Matthews, of the Bethlehem Steel Company, yesterday afternoon and that Mr. Grace was under the impression that all the forgings necessary for the Ordnance program could be handled by the Bethlehem and Midvale Companies but that the difficulty would be in procuring sufficient machining facilities.

Mr. Grace's suggestion was that, after a conference which he would have with the Midvale officials, that the two companies make arrangements for enlarging their facilities at both plants. While

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this policy was not entirely in accord with the report recently submitted on big gun forgings, it was believed that Mr. Grace should at least present his solution of the question even though perhaps it may not meet with approval.

Mr. Scott presented a draft of a letter which he had written for presentation to the Council, which letter was discussed and in connection with which Mr. Scott and Mr. Rosenwald expressed their views on the situation.

59 *Report on conference with powder manufacturers.*—Mr. Scott advised the Board that a conference had been held yesterday with the DuPont Powder people, in which meeting a possible shortage of powder was mentioned and that further data on this subject was being compiled by the DuPont people and would be submitted by them at an early date.

The meeting adjourned at 9:15 a. m.

CHESTER C. BOLTON, *Secretary.*

60 Minutes of Meeting of General Munitions Board held Thursday, April 12, 1917, at 8:15 a. m., in the Munsey Building

There were present: Dr. Martin; Dr. Simpson; Colonel Hodgson; Major Pierce; Paymaster Hancock; Mr. Rosenwald; Mr. Eisenman; Mr. Scott; and Mr. Bolton, Secretary; Mr. Scott presiding.

Requirements of Medical Section.—After a short talk on the small-arms situation, Dr. Simpson presented papers from the Medical Section asking information on the following:

(1) Patent laws permitting the manufacture in this country of articles patents for which are held in foreign (enemy's) country.

(2) Diplomatic adjustments permitting the raising of embargo on needles and other needed articles.

(3) Condition of establishing daylight-saving plan.

(4) Changes in law permitting women to work at night.

(5) Proper recognition of patriotism of skilled laborers so as to keep them at work.

Dr. Simpson stated that this covered data asked for by manufacturers who were to meet on Sunday with Dr. Simpson.

The Chairman advised that he would present the subject of diplomatic adjustments to the Secretary of War for reference to the Secretary of State. At the same time Dr. Simpson was requested to submit a list showing the needed articles.

The inquiry on the daylight-saving plan and the one on the change in the law regarding women were referred to Dr. Martin to present to the council for consideration.

61 The Chairman stated that the proper recognition of patriotism was under consideration at the present time by the Navy Department and that reply to this inquiry would therefore be held in abeyance until the Navy Department's decision was known.

In connection with the above the Secretary read a letter addressed to Dr. Simpson regarding the organization of the makers of surgical instruments for the purpose of supplying instruments to the Government in the best and quickest way.

Dr. Simpson presented a partial list showing articles required by the Medical Section which were difficult to procure, and in connection with this the Chairman called attention to the shortage of aluminum, suggesting that this matter be taken up with Mr. Davis, of he Aluminum Committee, looking forward to the temporary surrender of the use of that commodity by automobile manufacturers. Such action was granted, and by a similar act the same decision was reached in regard to leather and the subject referred to Mr. Rosenwald's Committee.

The Secretary also suggested, with reference to the number of articles listed which were difficult to procure, that he should discuss the matter with Mr. Treadway, of Cleveland, with a view to presenting the situation to a body of hardware manufacturers and arranging for them to produce such articles promptly as they might be capable of manufacturing.

The shortage in tin was also called to the attention of the Committee and the suggestion made that the question of a change in the form and size of containers be submitted to the Canners Association with a view to reducing the amount of tin required for that purpose.

62 *Raw Material, Wool.*—Mr. Rosenwald reported that no definite decision had been reached regarding the question of wool raised in yesterday's meeting, but that such decision would be presented to the Board not later than tomorrow.

The Chairman presented a copy of a letter addressed to the Council of National Defense regarding overcrowded conditions in the War, State, and Navy Building, which was in line with action requested at the meeting of April 10th; such letter was accepted and has been appended herewith as part of these minutes.

After an informal discussion of various subjects, the meeting adjourned at 10 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

63 [Copy]

APRIL 11, 1917.

COUNCIL OF NATIONAL DEFENSE,
Washington, D. C.

GENTLEMEN: It is essential that I bring to your attention the greatly overcrowded condition of the departments now housed in the War, State, and Navy Department Building.

My justification for emphasizing this is the fact that the present overcrowded condition of these departments, the resulting lack of facilities for the conduct of the work, and the unhealthful condition under which the work is being done, create a very grave danger of a serious breakdown unless the condition is immediately relieved.

It is a necessary part of the preparations for war which we are making, that relief in the form of increased suitable space for the housing of these departments, and for the increased personnel now authorized and necessary, be provided. Every hour of delay in making this provision retards vitally the work now in hand.

Very respectfully,

F. W. SCOTT,
Chairman General Munitions Board.

64 **Minutes of Meeting of General Munitions Board held Friday, April 13, 1917, at 8: 15 a. m., Munsey Building**

There were present: Mr. Scott; Mr. Rosenwald; Mr. Eisenman; Dr. Simpson; Colonel Hodgson; Lt. Col. Hoffer; Major Pierce; Paymaster Hancock; Commander Kearney; and Mr. Bolton, Secretary; Mr. Scott presiding.

The reading of the minutes of the previous meeting was dispensed with.

Raw Material—Wool.—Colonel Hodgson reported on this subject that General Smith had advised him that orders had been placed for articles requiring wool so that there was no necessity for holding the wool recently offered by the woolen brokers.

Depot Quartermasters had been ordered to purchase 1,868,000 blankets and that they had actually placed orders for 1,377,000. The difference between 1,868,000 and the initial equipment for 1,000,000, viz, 2,036,540, was represented by the quantities on hand or purchased under opening of March 5th.

Colonel Hodgson further advised that he would investigate the condition of orders mentioned above, determining what had actually been delivered, and the rate of delivery of the balance. He further reported that he had not as yet received data on all articles requiring wool but would have these figures in the near future.

Colonel Hodgson further stated that the feeling at the Quartermaster's Department seemed to be that there was no apprehension as to wool at this time.

Raw Material—Spelter, Zinc, and Copper—Paymaster Hancock spoke of the arrangements made as to price of spelter and
65 further advised that he had been able to get data on zinc, which matter was discussed at yesterday's meeting. The copper situation was also discussed, in which it was shown that the requirements would be much greater than had been arranged for if the program before congress was carried out, an amount about ten times larger than agreed upon being necessary. The Secretary was asked to call this matter to Mr. Baruch's attention.

Automobile and Motor Trucks.—The Chairman advised that he had learned yesterday that the Signal Corps, Medical Corps, Bureau of Yards and Docks, and the Quartermaster's Department of the Army had all requested bids on motor cars, but no quantities had been specified, which naturally caused some confusion among the motor-car manufacturers, and which was a very good example of the manner in which this Bureau could serve, i. e., through cooperation.

Major Pierce asked that he be allowed to investigate this point, particularly in view of the fact that it was not desirable to have various makes of cars in the field because of spare-part difficulties, and that on this account it was preferable to have all orders placed through the Quartermaster's Department for certain standard makes of motors only.

Cooperation in the matter of Canadian requirements.—The Chairman reported that he had a conference yesterday with the treasurer of the Munitions Board of England and also with the Chairman of the Munitions Board of Canada, and had been furnished with a statement as to the actual requirements and orders of the Canadian Government and further with a list of the companies from whom the Canadian Government were procuring material.

66 The Canadian Government asked that this Government do not interfere with their orders, particularly in reference to steel plates and tin plate.

The Chairman referred the list to Major Pierce to be gone over by him, with a request that the entire matter of cooperation and precedence of orders be taken charge of by him.

Gauges.—The Chairman advised that the question of assembling gauges for checking had been discussed with the Canadian officials and that it appeared to be a matter of intense importance to arrange for assembling gauges for checking at the earliest possible moment. The Chairman requested authority to delegate a committee to be sent to Ottawa, Canada, to investigate this matter, suggesting Mr. F. C. Pratt, of the General Electric Company, Dr. Fisher, of the Bureau of Standards, and a third person, preferably from the Ordnance Department, to look over the situation.

Such motion was made and properly carried.

The Secretary presented a communication received from Lt. Col. Horton of the Quartermaster's Corps, calling attention to certain wool growers who refused to sell raw material to certain woolen mills that were anxious to supply wool to the Government. This matter was referred to Colonel Hodgson for attention.

Diversion of Machinery under contract for delivery under French and British orders.—The Secretary read a memorandum addressed to Major Pierce regarding the diversion of machinery under contract for delivery on British or French orders, which matter was
67 referred to the Chairman to take up with the French and British officials.

Request from Bureau of Engineering for help on machinery.—Paymaster Hancock presented a request from the Bureau of Engineering regarding the delivery of certain machinery for that Department, which was delayed on account of urgent orders required by the Rock Island and Watervliet Arsenals, and the Washington Navy Yard.

The Secretary was requested to find out how urgently the material was needed by the Arsenals and to learn definitely whether the situation at the plant of the company supplying the machines was correct as reported.

Request from the Signal Corps for help in obtaining material for signal flags.—The Chairman presented a memorandum from Major Wallace, of the Signal Corps, calling attention to the fact that the Signal Corps was unable to obtain material for signal flags and would like help in this direction, there being need for about 20,000 yards of material. The matter was referred to Mr. Eisenman for attention.

Embargo on Barytes.—The Chairman presented a communication received from Brig. Gen. Crozier, calling attention to the desirability of preventing an embargo on barytes at this time. This matter was ordered referred to Mr. Willard's Committee for attention.

Price arrangement on Shells.—Paymaster Hancock spoke on this subject, calling attention to the fact that he did not believe that the functions of this Board was to fix prices on commodities, that the Secretaries of the different departments should take the responsibil-

ity of this and that a conference on the subject had been held in the Navy Department yesterday.

68 The Chairman referred to suggested prices which had been made by this Board on rifles, seacoast ammunition, and machine guns, at the request of the Secretary of War, which was quite in order in view of the fact that the Munitions Standards Board had been giving this question special study.

It was the consensus of opinion that the functions of the Board were merely to bring data together on the various subjects and give the different Departments the benefit of such information, and that where the country's production was not up to demands the board should help to solve the difficulty.

Commander Kearney stated that the Bureau of Ordnance of the Navy was at present purchasing material in the regular manner and that such information as has been obtained could be had by the Ordnance Department.

Storage Capacity.—The Chairman spoke of the matter of storage capacity and warehouses in different localities in the country and stated that he would like to appoint a committee consisting of Mr. Bissell of the National Fire Underwriters' Association, Mr. Bush of the Bush Terminal Co., and Mr. Cook of Philadelphia to draft a report on depots and distribution.

Such action, upon motion, was duly authorized, with the suggestion that the different combinations of ideas which the government has gained from reports made through the different departments be submitted to this committee for consideration.

69 *Matter of Office protection.*—Dr. Simpson suggested that some means be taken to more properly insure safety of records, etc., in this building, and was requested to confer with Mr. Gifford on the subject.

Pressed Steel Works.—The Chairman stated in conference with Colonel Rice that he had learned that there was an apparent feeling of lack of help on this matter, and the Chairman pointed out that while the committee on pressed steel manufacturers had met and gone over the situation, there was not sufficient data on which they could report comprehensively, and that such data had been requested by Colonel Dunn at the Ordnance Department, but was as yet not forthcoming.

Colonel Dunn was requested to take up this matter again with Colonel Rice.

Nitrate.—Paymaster Hancock presented the matter of procuring nitrate to the Board for consideration, and the subject was discussed at some length, during which the Chairman presented a communication received from Mr. Baruch suggesting immediate action by both the army and the navy, in view of the serious conditions existing at present in Chile. This communication was to be presented to the Secretary of War and no action taken by the Board.

The meeting adjourned at 10 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

70 Minutes of Meeting of General Munitions Board held Saturday, April 15, 1917, at 8: 15 a. m., Munsey Building

There were present: Mr. Scott; Mr. Rosenwald; Mr. Eisenman; Dr. Simpson; Colonel Hodgson; Major Pierce; Paymaster Hancock; Colonel Dunn; Colonel Blunt; Mr. Bingham, Assistant Secretary; and Mr. Scott, presiding.

The reading of the minutes of the previous meeting were dispensed with.

Cotton Duck.—The Chairman read a report from Colonel Babbitt who advised that he and Mr. Eisenman had been over this subject but could report no definite findings. It further developed that the Ordnance Department is in immediate need of #9—36½″ duck for haversacks. Due to orders placed with mills by the Quartermaster's Department for cots, and likewise the Medical Department, machines needed for the manufacture of the #9—36½ are unavailable.

Because of the greater importance of immediate delivery of haversacks over cots, the following resolution was adopted, and action thereon referred to Mr. Eisenman:

Be it resolved, That Mr. J. Spencer Turner, representing the Committee on Cotton Goods, be directed to put the necessary machines for Rock Island requirements in the matter of No. 9—36½″ duck for haversacks on to that regardless of the present effect on demands for cots requiring No. 8—34″ duck for Medical and Quartermaster's Corps, providing additional loom capacity to meet the needs is not now available.

The Chairman suggested that it could be advisable to form a committee to look into the matter of handling stores. Major Pierce was asked to go into this subject with the various departments and report to this committee.

71 *Committee on Distribution.*—The Chairman read a report from the Committee on Distribution regarding the industrial reserve, storage, and need for assembling bases. It was resolved that the above committee should be kept active.

Boring Mill.—Paymaster Hancock inquired about boring mill and the Secretary was instructed to advise as to the probable delivery date.

Foreign Requirements.—Information was given regarding certain requirements of the Canadian and English Governments and referred to the Secretary to accumulate all data.

A motion was passed to obtain the Russian requirements, which was omitted from the original motion covering the other countries. Major Pierce was appointed to obtain the information from the War Department.

Gauges, Dies, Etc.—Colonel Montgomery was authorized to accompany Mr. Pratt and others to study the subject with the Canadian Government.

Illumination of Battlefields.—Major Pierce asked what battlefield illumination had been developed and that a report be submitted as to what materials are required. This matter was referred to Colonel Blunt for investigation.

Cantonment.—Colonel Hodgson asked if it would be possible for the general staff to give the Quartermaster's Department data on cantonment so that they could prepare to order the necessary material.

Shoes.—Colonel Hodgson then read a report from the Committee on Shoes and leather industries, in which it was suggested
72 that the navy adopt a universal last for shoes.

Letter from Babcock & Wilcox Co.—Correspondence with Babcock & Wilcox Company about delivery of boilers to John H. Meyer & Co., was read and placed on file.

Dr. Simpson offered the following resolution:

In recognition of the important work being done by the Red Cross, the Munitions Board desires to cooperate as far as possible with the Red Cross in the matter of securing needed Medical and Surgical Supplies for their hospitals and for the purposes of having dressings made by the members of the Red Cross.

To further that end the Red Cross will, of course, recognize the necessity for establishing an order of precedence so that the equipment will be supplied in the order of needs and of importance. Further, the Red Cross will, of course, acquiesce in the plans for standardizing which have already designated the essential staple instruments, etc., which can be produced in this country in quantities sufficient for the civil and military needs, especially as the Red Cross was represented fully on the Standardization Committee. The matter of releasing for the Red Cross the cotton goods is now being taken up with the representatives of the army and manufacturers.

A letter addressed to Dr. Simpson from the Red Cross was read showing their desire to obtain cooperation with the Munitions Boards.

Mr. Rosenwald reported that the Quartermaster has given him information that a very large portion of necessary Quartermaster's equipment had been ordered and that he was now giving particular attention to the delivery of this material in order that there
73 would be as little delay as possible in completing the equipment for one million men.

The meeting adjourned at 10:30 a. m. o'clock.

——— ———, *Assistant Secretary.*

74 **Minutes of Meeting of General Munitions Board held Monday, April 16, 1917, at 8:15 a. m., Munsey Building**

There were present: Mr. Scott; Colonel Blunt; Colonel Dunn; Major Pierce; Paymaster Hancock; Mr. Summers; Mr. Rosenwald; and Mr. Bingham, Assistant Secretary; Mr. Scott in the chair.

The reading of the minutes of the previous meeting was dispensed with.

Sheet and Tin Plate.—A telegram was read from C. H. Bently, bringing to the attention of this Board the fact that there would probably be a shortage in tin plate, due to large exportations. At this point Mr. Bonner, of the United States Steel Corporation, was invited into the meeting and the above matter referred to him for investigation.

Decision as to prices of munition materials.—After reading a paper from the War Department asking as to the Board's opinion regarding a reasonable price for the Vickers machine guns, Colonel Dunn suggested that the Chairman of this Board be given authority to fix prices on all materials pertaining to munitions.

The following recommendation was accordingly drafted and is to be submitted to the Secretary of War through the proper channel:

The Munitions Board, having been appointed by the Council of National Defense and having been called upon to perform, among other duties, that of determining what are fair and just prices to be paid by the Government for munitions and related supplies, and it being impossible to get the necessary results by discussions that are not followed up by prompt decisions, it is recommended that the Council of National Defense authorize the Munitions
75 Board to act for the council when called upon to do so by a Department head, on questions involving the determination of fair and just prices for munitions and related supplies.

The Chairman then stated that on certain materials a basis for prices had already been fixed by law, referring to the basis for fixing costs in computing the excess-profits tax, to which a 10% profit could be added.

Conflict of aeroplane orders.—The Chairman reported that Mr. Flavelle, of Canada, had asked that the orders which the Canadian Government had now with the Curtis Aeroplane Company be not interfered with by orders from the United States Government. Major Pierce then brought to attention the need for aeroplanes in the United States army.

The matter was referrred to Mr. Scott and Major Pierce.

Schedule of Conferences.—The Secretary was instructed to send to the interested parties proper notification of conferences as to date and place designated.

Explosives.—The Chairman reported that a conference had been held yesterday with Colonel Dunn and representatives of the Du Pont Powder company, at which it was decided that the facilities of the Aetna Explosive Company would probably not be needed.

Major Pierce suggested that due to the location of the Aetna Explosive Company's plants it might be advisable to keep them in operation.

Colonel Dunn and Mr. Summers were appointed a committee to look into this matter further.

76 *Embargo on Scrap.*—The Chairman read a telegram given him by Senator Phelan from the Judson Manufacturing Company and the Pacific Coast Steel Company advising as to the necessity for placing an embargo on scrap which was being shipped largely to Japan because of the shortage and great need for this material on the West coast.

The Chairman was asked to communicate to Senator Phelan that the matter had been submitted to the Board and that it was their opinion that more information on the subject was needed to decide on any definite action.

Further list of munition manufacturers.—Colonel Blunt submitted a further list of manufacturers who were engaged in munition work for the allies sent to him by Mr. Stettinius. This was made a matter of record.

The meeting adjourned at 10 o'clock a. m.

W. W. Bingham, *Assistant Secretary.*

77 **Minutes of Meeting of General Munitions Board held Tuesday, April 17, 1917, at 8:30 a. m., in the Munsey Building**

There were present: Colonel H. Fisher; Dr. R. C. Holcomb; Dr. T. T. Simpson; Lt. Commander Gardner; Commander R. H. Leigh; Paymaster J. H. Hancock; Rear Admiral H. H. Rousseau; Lt. Col. W. B. Lemly; Rear Admiral W. S. Capps; Major P. E. Pierce; Capt. A. B. Barber; Gen. Thos. Cruse; Colonel Blunt; Colonel Dunn; Commander T. A. Kearney; Mr. L. McH. Howe; Mr. Julius Rosenwald; Mr. F. A. Scott; Mr. C. C. Bolton, Secretary; Mr. Bernard Baruch; Mr. L. L. Summers, representing the Raw Materials Committee. Mr. Scott presided.

The reading of the minutes of the previous meeting was dispensed with and this duty delegated to a committee consisting of Commander Kearney, Major Pierce, and Mr. Summers, the minutes of meetings from April 10 to April 16, inclusive, to be read.

Memorandum from Secretary of War regarding prices of munition materials.—The Chairman presented to the Board the recommendation which was drafted at the meeting of April 16th, recommending "that the Council of National Defense authorize a Munitions Board to act for the Council, when called upon to do so by a Department head, on questions involving the determination of just and fair prices to be paid by the Government for munitions and related supplies," which recommendation had been submitted by the Chairman to the Secretary of War, in reply to which the Secretary addressed the following memorandum, i. e.:

78 The General Munitions Board, having been appointed by the Council of National Defense, and having been called upon to perform, among other duties, that of determining what are fair and just prices to be paid by the Government for munitions and related supplies, I authorize the General Munitions Board to act on questions involving the determination of fair and just prices for munitions and related supplies, when called upon to do so by a Department head.

This memorandum was ordered filed and record made of same in the minutes.

The question as to whether the President had delegated the right of this Council to fix prices was raised; and, while it was shown that this had not been done, it was pointed out that the authority above mentioned from the Secretary of War made such action legal.

Admiral Capps suggested that a copy of the correspondence relating to the memorandum from the Secretary of War should go through the Navy representatives to the Secretary of the Navy for his attention and for such action as he might take, which step was ordered to be taken.

Supply of Cotton Duck.—In commenting on the price situation, General Cruse asked whether his understanding that there were sufficient loom facilities to prepare all the cotton duck necessary (which statement had been made by Mr. Turner) was correct, and that the matter be investigated.

He further stated that undoubtedly not as much cotton duck for tentage would be required as originally planned, due to the fact that there would be cantonments in as large numbers as possible.

79 *Report on Shell conferences.*—Colonel Dunn reported verbally on conferences held on April 13, 14, and 17, advising that the object of these meetings was to arrive at an idea as to fair and just prices, the shrapnel meeting having resulted in bringing the manufacturers of 3″ shells very close together, their prices ranging from $4.50 to $5.00 and the price of $4.70 being agreed upon as very fair by all.

The meeting of the 3″ high-explosive-shell manufacturers, on the 14th, was not so satisfactory, in that the prices suggested ranged from $3.35 to $4.75 and seemed rather high.

The forgings meeting on Monday was even more unsatisfactory, as no statement could be had for a long time as to a fair price, and it was learned later that certain interests were working together to hold up prices of forgings.

The question as to whether flat prices or prices based on the cost-plus-percentage basis should be figured was discussed and also inducements on the percentage basis which would tend to help keep prices low. This latter plan seemed to be much more preferable to the manufacturers than a flat price.

Report on storage facilities.—Major Pierce reported verbally on the conference he had had with Messrs. Bissell, Cook, Day, and Kendall, who had drafted up a memorandum regarding storage facilities throughout the country, which memorandum had been submitted to the War College and was being considered at this time. The memorandum combined and involved war plans so closely that it seemed best to have the subject studied at the War College, awaiting
80 developments. As the present plans suggested 16 areas, and as the divisions of troops will be determined in proportion to the facilities of these areas, the size and number of storehouses can only be determined after the troops are located.

Two types of storage houses are under consideration, one a large type to be built in safe areas and the other a smaller type for mobilization depots and near the troops.

In connection with this report General Cruse advised of a meeting on this subject held last year at the War Department and stated that the present warehouses combined both Ordnance and Quartermaster's Departments, that some were very isolated, and that no post had more facility for storage supplies than for six months for troops at these posts.

It was pointed out that the location of these storage depots is most important in respect to transportation facilities. In connection with the transportation facilities the Chairman read a communication from Mr. Hodges pointing out the necessity of the prompt removal of cars in order to prevent car shortage and congestion.

Conference with Dupont Powder People.—Mr. Summers presented a verbal report on conferences held with the representatives of the Dupont Powder Company in connection with the advisability of continuing the Aetna Powder Company, who at present are in financial trouble. Mr. Summers reported that the Aetna People had had valuable experience in the manufacture of smokeless powder. He also spoke of the activities of the Dupont Company in the
81 past and their actual dealings with the allies, advising that they were contracted up to 95% of their capacity until

October 1st and that they had a capacity of 32,000,000 pounds per month. He stated that the vital thing was to learn what the requirements of our army were in order to ascertain the advisability of continuing the Aetna plant.

In connection with this matter Mr. Summers pointed out the very great possibility of shortage in army requirements and estimates.

The question of having the entire powder and explosive plants in one locality under one control was discussed, and it was decided to hold this matter in abeyance until Colonel Dunn and Mr. Summers could get more information.

Allies' Requirements.—The Chairman reported that the English, French, and Canadian Governments had submitted lists showing contracts that they have in this country for munitions and further valuable information as to contractors and their efficiency.

The Chairman advised that most of the items desired by the allies did not conflict with the requirements of this Government but that chemicals and aluminum were very necessary for all.

Armoured Cars.—The Chairman advised that this subject had been disposed of by the Ordnance Department, as arrangements had been made very satisfactorily with manufacturers for the production of these cars.

Big-Gun Forgings, 3"-6".—The Chairman reported that he had been advised by both the Midvale and the Bethlehem Steel Companies that they could so expand their present equipment that it would be possible for them to produce all the Government orders and furnish these orders complete and in time for requirements. The chairman questioned whether these facilities would be sufficient.

82 *Precedence of Requirements on Forgings.*—The Chairman reported a memorandum had been submitted asking for precedence on requirements of forgings wanted in the same plant by departments of the Army and Navy. This matter was under discussion by representatives of both departments and would be decided today.

Small Arms.—Colonel Blunt reported verbally on the conference held with manufacturers of small arms, stating that representatives from the Winchester Repeating Arms Company and the Remington Arms Company had met to decide the best way to secure one million rifles and that by taking over the machinery owned here by the British Government and producing Enfield rifles converted to the United States requirement as to calibre, the two companies mentioned above, together with the Eddystone plant, could complete the entire requirements by the first of March next, commencing at the rate of 125,000 rifles by the 1st of October.

Colonel Dunn stated that the matter of prices had been arranged, based on a percentage cost basis.

Colonel Dunn further stated that it might be possible to make arrangements with the British Government whereby the machinery owned by them need not be purchased.

In connection with the contracts arranged, Admiral Capps advised that Naval Bureaus had been placing contracts for very large amounts on this same plan of procedure.

83 *Report on Medical Meetings.*—Dr. Simpson made a verbal report on meetings of Medical men and manufacturers held within the last two days, stating that the question of drugs, instruments, etc., had been fully discussed and the requirements of the army and navy considered. The manufacturers showed a splendid spirit of cooperation and a desire toward reducing the requirements of the civil and army and navy branches to a minimum.

The form of contract was also discussed at these meetings, in which it was shown that some manufacturers preferred not to take orders and some of these were most essential to the requirements.

Dr. Simpson was asked to submit suggestions which had come to him from these meetings to the Munitions Board meeting on Thursday next.

Colonel Fisher spoke on this subject commenting on the splendid desire shown to aid the Government, which remarks were endorsed by Dr. Holcomb.

War Insurance.—The question of War Insurance in connection with contracts was raised by Colonel Dunn, and it was learned that this feature was being taken care of to a large degree in the Naval contracts which had recently been placed.

Message from Mr. Coffin.—The Chairman read a telegram sent him by Mr. Coffin on April 16th, addressed to the Board, which message was ordered to be made a part of these minutes and is appended herewith:

84 [Copy]

[Western Union Telegram]

SYRACUSE, N. Y., *April 16, 1917.*

B15NY 177 NL.

FRANK S. SCOTT,
New Willard Hotel, Washington, D. C.:

I am sorry that I cannot meet with you today. I should like to be on hand to congratulate the Munitions Board upon tackling the job which foreign experience has shown to be vital to the successful contact of modern warfare. England's method has been to create new and experimental machinery. Ours is to coordinate and utilize to the utmost those same departmental agencies which have so long carried the burden under the old order of things military. We are entering the greatest conflict of all time. We must facilitate the flow of materials and finished products to our allies. We must meet our own vast military and naval program. We must plan to keep our country going as a successful and profitable business institution. We must so act that we shall cause the minimum of disarrangement in our economic and commercial affairs. Problems confront us on all sides, but close cooperation and team work will accomplish wonders. Our Munitions Board must help make History. Here's more power to you all.

HOWARD E. COFFIN.

85 *Cotton Duck Requirements.*—Mr. Eisenman came into the meeting at this point and reported that the matter of securing cotton duck had been thoroughly discussed and arranged for satisfactorily, that the manufacturers were proceeding to make the articles required by Colonel Babbitt, and, further, that a meeting was being held today on this subject with manufacturers of this line of goods.

Conference on electric conductors.—Paymaster Hancock reported that a conference had been held with reference to electric conductors, and a copy of the minutes of these meetings might be had by any of the Departments so desiring.

Major Pierce, speaking for the Signal Corps, requested that a copy of these minutes be sent to Major Wallace.

Industrial Reserve.—Mr. Howe spoke at length on this subject, calling attention to the fact that no action has as yet been taken on this regarding the Council, and presenting a letter from the Council to the Secretary of War regarding a resolution of the Advisory Council as to skilled operators.

Mr. Howe further read a letter received from Judge Gary on this subject urging some form of industrial reserve, and stating that he had received many requests that this subject be given immediate attention from leading manufacturers throughout the country.

The Chairman asked Mr. Howe to confer with Mr. Gifford on this subject, requesting the Council to publish circulars quoting the President on this subject in his recent proclamation. Such
86 motion was made by Admiral Capps and duly seconded and carried.

The Secretary was requested to send each member of the Board a copy of the resolution adopted by the Board on April 16th, regarding acting for the Council, when called upon to do so by a Department head, on questions involving the determination of fair and just prices for munitions and related supplies, and also a copy of a memorandum from the Secretary of War under date of April 16th, on this subject.

The meeting adjourned at 10:30 a. m.

CHESTER C. BOLTON, *Secretary.*

87 **Minutes of Meeting of the General Munitions Board held Wednesday, April 18, 1917, at 8:15 a. m., in the Munsey Building**

There were present: Dr. Martin; Dr. Simpson; Major Pierce; Colonel Blunt; Colonel Dunn; Colonel Hodgson; Mr. Summers; Mr. Eisenman; Mr. Rosenwald; Mr. Scott; Mr. Bolton, Secretary; Mr. Scott presiding.

The reading of the minutes of the previous meeting was dispensed with.

Communications received from the Ordnance Department regarding guns, projectiles, etc.—The Chairman presented several communications from the Ordnance Department regarding the delivery and prices of different devices of ordnance.

The matter of prices for machine guns was referred to the Chairman and Colonel Blunt for attention.

The matter of field artillery material, 8″ and 3″ howitzer, was referred to the Chairman and Colonel Dunn for attention, with a further understanding that prices could be readily determined after a conference with the British officials.

The Chairman also presented a report and correspondence from the Ordnance Department regarding orders which have been placed with the Bethlehem Steel Company, Washington Steel and

88 Ordnance Co., and the American Clay Machinery Company, for armor-piercing and deck-piercing projectiles, and regarding future orders for these projectiles.

It was pointed out that the army had placed certain orders for this class of material without asking for bids and had endeavored to confine itself to such manufacturers who were known to be entirely familiar with and capable of producing such class of material.

Big Gun Forgings.—The Chairman advised that a meeting would be held this morning with representatives of the Bethlehem Steel Company on the subject of big gun forgings, and requested the Board's views on the matter. It was pointed out that due to the present program for merchant vessels a considerable amount of forgings would be required for shafts which might interfere with the production of forgings for guns.

Price Situation.—This led to the discussion of the steel situation in general, during which the attitude of the United States Steel Corporation was commented on and the necessity of sane prices being arranged.

Dr. Martin advised that the matter of fixing prices had been discussed by the Council but nothing definite had been decided.

The entire matter of prices relating to food and labor was thoroughly discussed, as well as the subject of taxes levied by the Government in connection with cost of manufacture. It was
89 pointed out that this was the time to have adjustments made as early and promptly as possible.

Mr. Eisenman spoke on the price of cotton and pointed out that it was costing the Government today a great deal more than necessary, because of the fact that cotton on which bids were now being based was extremely high.

The Chairman asked for the right to discuss with the Chairman of the Council of National Defense the subject of prices pertaining to the various commodities which the Board had discussed this morning, and to state to the Chairman that the discussion had led to serious recommendations limiting prices of cotton, iron, wood, steel, coke, etc.

After some further talk, Mr. Summers moved that the Chairman be so authorized to present this subject as he saw fit, which motion was duly seconded and passed.

Precedence of orders.—The discussion of forgings further brought up the question as to what precedence should be given the orders for guns required by the Army and Navy in view of the fact that the new naval program for naval ships contemplated 4,000 additional guns.

The Chairman stated the probable plan for increasing the capacity of plants producing gun forgings and also explained the programs of the Army and Navy as laid out for guns. The Chairman also stated that the precedence of these 4,000 additional guns over the army requirements had not been decided, and Major Pierce spoke very strongly on this point in behalf of the army requirements, and pointed out the necessity, in his mind, for not upsetting the army program.

90 The Chairman stated that the Board has no right to decide the question as to this precedence until requested to do so, and

no matter how strongly the Board felt on these subjects, its duty was only to advise, and that it must be sure that it is prepared to be of service to the Government in whatever direction the Government might decide to move.

Rifle situation, big-gun forgings, ammunition, situations, etc.—The Chairman commented on the rifle situation, the gun and forgings situations, the ammunition and explosive situation, stating that all but the big-gun and forgings situations, which were being investigated at present, were in satisfactory shape, or arrangements had been made pointing to that state.

In this connection Paymaster Hancock was requested to obtain from the Navy Department information as to just what their ideas were regarding the arming of 1,000 merchant ships recently authorized, how soon the 4,000 guns for these ships would be wanted, and what the Navy Department's idea was regarding the precedence to be given orders for these guns.

Question of sustaining supplies from foreign countries.—The Chairman asked Mr. Rosenwald whether the general question of sustaining supplies of articles necessary to this country, and particularly such items as are essential for the manufacture of munitions, such as manganese, ores from Brazil, and nitrates from Chile, had been discussed by the Council.

Mr. Rosenwald stated that these matters had been referred
91 to Mr. Baruch and Mr. Summers. Speaking for Mr. Baruch's committee, Mr. Summers stated that as far as the matter of manganese was concerned this question had been submitted to the various steel companies as to their requirements, but none had replied in reference to the matter as yet, and until these questions were answered the Raw Materials Committee could not report.

The Chairman asked if, in the opinion of Mr. Rosenwald and Dr. Martin, it was improper for this Board to discuss such matters with the Advisory Council, and was advised that such action seemed quite proper.

Report on meeting of manufacturers of time fuses.—Colonel Blunt reported verbally that a meeting had been held yesterday of manufacturers of twenty-one-second fuses, and also manufacturers of 3″ cartridge cases, and the cost of four and one-half million fuses and seven and one-half million cases had been discussed.

Colonel Blunt stated that the manufacturers had met the situation more than half way in the matter of prices and had agreed on a basis of prices lower than their present bids to the Ordnance Department, which prices were satisfactory to the Ordnance Department.

He further advised that the matter of delivery was also satisfactory.

Colonel Blunt stated that prices had been figured on a flat price based on today's market for copper and spelter with a further
92 understanding that if the Government was able to arrange for a reduction in the price of copper and spelter, prices would be accordingly lowered.

As the order for this material was not very large, the cost-plus-percentage basis was not desired at this time because of the large amount of details necessary to this system.

Delivery of raw materials to assist cotton goods situation.—Colonel Hodgson presented a letter from the Committee on Cotton Goods Industries requesting that delivery of raw material be facilitated, which would materially assist in the cotton-goods situation. This letter was referred to the Secretary for immediate attention.

Memorandum submitted.—Paymaster Hancock submitted a memorandum of the agreement made with the zinc people, covering the requirements of the Navy, also a memorandum of the United States Steel Corporation covering the requirements of the Navy for plates and structural shapes.

Brass and Copper report.—Mr. Summers advised that due to the great amount of work which Lieutenant Colonel Hoffer had been obliged to do in the last few days, he had been unable to get a report from the Ordnance Department pertaining to the estimates from manufacturers of brass, a report of which situation had been requested from the Committee composed of Mr. Summers, Paymaster Hancock, and Colonel Hoffer, under date of April 5th.

Mr. Summers advised that the naval estimates had been submitted and Colonel Dunn was requested to assist Colonel Hoffer in this matter.

The meeting adjourned at 10 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

93 Minutes of Meeting of General Munition Board held Thursday, April 19, 1917, at 8:15 a. m., in the Munsey Building

There were present: Dr. Martin; Dr. Simpson; Col. Hodgson; Col. Blunt; Col. Dunn; Maj. Pierce; Paymaster Hancock; Mr. Rosenwald; Mr. Eisenman; Mr. Summers; Mr. Scott; Mr. Bolton, Secretary. Mr. Scott presided.

Report on activities of Medical Sections.—Dr. Simpson presented a report covering the activities of the Medical Sections during the last week, reporting on several conferences and offering several recommendations, and further read a draft of a suggested letter to certain manufacturers from whom complaints had been received because they did not receive due consideration at the hands of the medical representatives. The report was ordered received and to be filed after proper action had been taken relative to the suggestions incorporated therein.

Advice on legal matters.—In connection with Dr. Simpson's report, the necessity of legal advice from time to time was pointed out, and the Chairman was requested to write to Mr. Roy Bulkley of Cleveland, notifying him to come to Washington to act with this Board.

Raw Materials, particularly lumber, for vehicles.—The Chairman reported on a conference held with Mr. Butterworth, of the Deere Corporation of Moline, Ill., calling attention to the necessity
94 of planning for lumber requirements for the future for vehicles.

A communication from Colonel Baker in connection with this subject was read, together with a statement from several large ve-

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hicle manufacturers as to present and future requirements for horse-drawn vehicles. It was shown that it was necessary to call together a group of manufacturers to arrange for the necessary inflow of seasoned lumber, and to protect the interests of both the Government and the manufacturers.

Mr. Butterworth, of the Deere Corporation, was suggested to act in this capacity, and the Chair was authorized to appoint him to call a meeting for next week, of which he would be chairman.

In connection with this matter the Chairman read a memorandum from a manufacturing company regarding deliveries of orders from various departments, in which memorandum it was suggested that a centralizing or coordinating department be formed, a department that might be termed a "central production department." This memorandum was interesting in that the suggestion outlined one of the present functions of the Board.

Communication from the Ordnance Department.—The Chairman presented a communication from the Ordnance Department regarding the delivery of gun forgings, which matter was referred to Mr. Vauclain for attention.

Communication with the Bethlehem Steel Company regarding the manufacture of guns.—The Chairman presented communications from the Bethlehem Steel Company suggesting two or three methods of increasing the production of that plant, and particularly
95 with reference to increasing the production of gun forgings. After some discussion the communications were laid on the table for future consideration.

Appointment of Vice Chairman.—Mr. Scott advised that he expected to be absent for few days next week and during that time would like to have Dr. Martin preside at the meetings. Such action was moved and properly carried.

Communication from the Midvale Steel and Ordnance Co. on big guns and forgings.—Mr. Vauclain and Mr. Crowell came into the meeting at this point and presented a communication from the Midval Steel Company, suggesting a means of enlarging the production of gun forgings and guns, which communication was read by the Secretary.

The situation in general was then discussed. Mr. Vauclain spoke first, stating that after careful study the development of capacity for forgings seemed a matter of first importance, and that the arranging for facilities for machining big guns would be simple after the forgings had been arranged for.

Mr. Vauclain spoke at length on the facilities of the Midvale plants, explaining how after conferences with the officials of this company it seemed best to carry on the big-gun work at Midvale. He further suggested an expansion of government plants in this respect, which, however, was shown to be contrary to General Crozier's policy.

The matter of compensation in the case of both the Bethlehem and the Midvale corporations, because of increased facilities, was discussed at length and it was also pointed out that the Bethlehem
96 Company in its proposed program had only been figuring on definite estimates of the requirements of the army and navy,

of approximately 1,650 new guns, and that no consideration had been given to the guns required in the new naval program.

It was further stated that the plan suggested by both the Midval and Bethlehem companies was only one to procure guns within the time required.

Committees on big-gun forgings and machines.—After further discussion of this matter, the Chairman appointed Mr. Vauclain as Chairman of a committee to work out the question of increasing the capacity of the country for big-gun forgings and machining.

The Chairman also suggested the appointment of a committee to negotiate with both the Midvale and Bethlehem Steel Companies, and upon motion duly made and carried, he appointed Colonel Dunn, Major Pierce, Paymaster Hancock, and Mr. Summers, together with Mr. Scott ex officio, to conduct such negotiations and prepare recommendations for submission to the Chief of Ordnance.

The Chairman also spoke on small arms and ammunition, and upon proper authority, appointed Colonel Blunt, Paymaster Hancock, and Major Pierce, with Mr. Scott ex officio, as a committee to draft recommendations on small-arm requirements.

The Chairman further suggested a committee from the General Munitions Board to have under its control and direction the working out of a general plan for making contracts, and method of payment. Upon motion duly carried, a committee of Mr. Scott, Colonel Dunn, Colonel Blunt, Colonel Hodgson, and Paymaster Hancock was appointed with instructions to report on Wednesday next.
97 Mr. Summers moved that the Chairman be a member ex officio of all committees, which motion was properly seconded and carried.

Discussion held before Federal Trade Commission.—In connection with these committees the Secretary was requested to send a transcript of the discussion held before the Federal Trade Commission, and the report of the Federal Trade Commission on methods of payments and contracts to the members of the two committees referred to above.

Mr. Summers moved that contracts now pending need not wait for the decision of the two committees created (noted above) and that these committees should act on future negotiations. This motion was duly seconded and carried.

Memorandum from the Manufacturing Chemists Association.—Colonel Dunn presented a memorandum from the Manufacturing Chemists Association outlining result of a meeting held yesterday, and incorporating a memorandum with reference to employees in chemical plants, also a memorandum regarding coastwise ships as affecting employees.

Memorandum from Bureau of Steam Engineering.—Paymaster Hancock presented a memorandum from the Bureau of Steam Engineering outlining precedence to be given forging orders placed by that bureau, which memorandum was ordered filed and Paymaster Hancock was requested to suggest similar action to the other bureaus of the Navy Department.

The meeting adjourned at 11 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

98 **Minutes of Meeting of the General Munitions Board held Friday, April 20, 1917, at 8:15 a. m., in the Munsey Building**

There were present: Dr. Martin; Dr. Simpson; Col. Hodgson; Col. Blunt; Major Pierce; Admiral Rousseau; Paymaster Hancock; Mr. Rosenwald; Mr. Eisenman; Mr. Bolton, Secretary; Dr. Martin presiding.

The reading of the minutes of the previous meeting was dispensed with.

Communication from the Ordnance Department requesting price information.—The Secretary presented two communications from the Ordnance Department, one referring to 4.5″ howitzers of English design, of which 200 were desired, and the other referring to 18-pound British model field guns and carriages, of which 100 were desired. Both communications requested that the Board advise the Ordnance Department as to prices which appeared just and reasonable for this equipment, which communications were ordered referred to Colonel Dunn for attention.

Communication relative to cotton duck.—The Secretary presented a communication received from the Committee on Cotton Goods, asking whether in view of the Board's action of April 14th, "directing the necessary machines for Rock Island requirements for haversacks be put on that work regardless of the present effect on demands for cots", that the manufacturers of duck who had contracted for this material required for cots be relieved from the penalties of
99 nondelivery, as outlined in their contracts.

This matter was referred jointly to the Quartermaster's Department and to Mr. Eisenman for attention.

Communication regarding power plants.—The Secretary presented a memorandum received from Dr. Baekeland regarding power plants at Niagara Falls and asking protection for these plants, first, by armed forces, and, secondly, by legislation permitting the use of additional water to secure their source of supply, which communication was ordered referred to the Secretary of War.

Communication from the Bureau of Yards and Docks.—Admiral Rousseau presented a communication from the Bureau of Yards and Docks calling attention, first, to the lack of cooperation with the General Munitions Board in the various cities, by independent action in those localities, which action was disturbing commercial and financial conditions in those particular centers; secondly, a list of materials on which information was requested, both as to supplies and prices; and, thirdly, the matter of prices relating to a contract with the Wellman Seaver Morgan Company of Cleveland, part of which work had been attempted to be sublet by that company at exorbitant figures.

Admiral Rousseau was requested to present a memorandum to the Board regarding the lack of cooperation, which matter will be referred to the committee appointed to work with state organizations.

The matter of materials was requested to be referred to Paymaster Hancock.

100 As to the matter of the Welman Seaver Morgan Company contract, it was moved and passed that the subject be submitted to the Board by the Bureau of Yards and Docks and referred to Mr.

Vauclain's Committee, appointed yesterday, relative to development of forging capacity, with a further recommendation that the Bureau of Yards and Docks arrange that some substitution be made for the parts now requiring high-priced forgings.

Report on small arms and machine guns, as requested April 18th.—Colonel Blunt reported verbally on the matter of prices of machine guns and small arms. which information had been requested by the Ordnance Department and presented to the Board under date of April 18th.

Colonel Blunt reported that on the 1,300 Lewis guns he had not definitely learned the price at which the Navy recently purchased same, but if that price was $750, the same as offered to the Army, he would suggest that a communication be sent to the Chief of Ordnance advising that on the order in question this Board believed the prices fair and reasonable, principally in view of the fact that this was the price charged for the same type of gun nearly a year ago, and also as the Navy has placed orders since the Ordnance Department order at the same figure, but suggesting that if further new and larger orders are to be placed this price should be investigated.

On the 4,000 automatic Colt machine guns and tripods for which the Ordnance Department contemplated placing an order, and which were offered to the Government at the same price as a similar quantity ordered in December 1916, Colonel Blunt suggested postponing decision until next week for further investigation.

101 The report was ordered received and action taken as suggested.

Report on Naval Guns.—Paymaster Hancock reported verbally that Admiral Earle believed he could provide the 4,000 guns called for in the recent merchant naval program independent of the Bethlehem and Midvale Steel Companies.

Illumination of Battlefields.—Colonel Blunt reported verbally in response to references made to him for investigation on April 14th, on this subject that the Ordnance Department could provide sufficient rifle grenades and trench mortars for the army's requirements, and that the illuminant could be furnished at any time or in any quantities by various manufacturing companies as desired.

Medical manufacturers' offer.—Dr. Simpson reported verbally on an offer made by a reliable firm manufacturing catgut, who offer their plant for the use of the Government in case of need.

No action was taken but it was pointed out that this was a matter which needed legal investigation.

It was moved by Paymaster Hancock and properly seconded, that the General Munitions Board prepare a list of the articles and material required by the various departments and bureaus of the Army and Navy, with a view to deciding what material is not to be purchased without the sanction of the General Munitions Board. This subject is to be referred to Mr. Scott upon his return for proper action. This motion was passed with the understanding that while the matter would be laid over until Tuesday, a communication would be sent to every member of the Board asking them to present a list of their department requirements at Tuesday's meeting.

102 Upon motion properly made it was voted to hold the next meeting of the Board on Monday, April 22, 1917, at 8:15

a. m., and further that Tuesday's meeting should be held at 9:00 a. m. instead of 8:30 a. m.

The meeting adjourned at 9:30 a. m.

CHESTER C. BOLTON, *Secretary.*

103 Minutes of Meeting of General Munitions Board held Monday, April 23, 1917, at 8:15 a. m., in the Munsey Building

There were present: Col. Hodgson; Col. Blunt; Col. Dunn; Paymaster Hancock; Major Pierce; Dr. Martin; Dr. Simpson; Mr. Summers; Mr. Bolton, Secretary; Dr. Martin presiding.

The reading of the minutes of the previous meeting was dispensed with.

Communication from Navy Department—subject, forgings.—Paymaster Hancock presented a memorandum received from the Commission of Navy Yards and Naval Stations with reference to the cost of certain forgings now under contract with the Wellman, Seaver, Morgan Company, of Cleveland, which that company were having difficulty in obtaining, and at a fair price.

In line with action decided on Friday, this matter was referred to Mr. Vauclain, of the Forging Committee, for comment or assistance.

Power Plants.—Paymaster Hancock presented a memorandum from the Bureau of Supplies and Accounts with reference to delivery of raw material for the manufacture of graphite electrodes, in which communication it was pointed out that the delivery of these electrodes necessary in the manufacture of electric furnaces was seriously delayed because of the lack of power at Niagara Falls, the elec-
104 trodes under discussion being obtained from the Acheson Graphite Company, of Niagara Falls.

While it was pointed out that the subject of power at Niagara Falls had been discussed at Friday's meeting and referred to the Secretary of War for his attention, it was suggested that this matter be called to the attention of the Advisory Commission in the hopes that some relief may be gained through this medium.

It was also suggested that this matter be referred to Mr. Bulkley as to legislation proposed on this subject.

Legal Matter.—Paymaster Hancock called the Board's attention to the fact that Mr. Frederick Dennet, at present practicing law in Washington, offered his services in any legal capacity the Board might see fit to utilize.

Articles not to be purchased without sanction of the Board.—The action of the Board on Friday in requesting a list of articles from each Department which should be submitted with a view of determining such articles as should not be purchased without the sanction of the Board, was discussed and it was pointed out that the names of the articles, not the quantities required, was what was desired, the thought being that the Board could designate such articles where there might be a chance of conflict in ordering. This action referred to orders being actually placed, but not suggesting interference in preliminary information regarding orders to be placed being secured.

105 During this discussion Colonel Hodgson called the Board's attention to the fact that an order issued by the Secretary of

War under date of April 12, 1917, stated "that no bids should be taken of requirements", and after discussion on this subject the matter was referred to Paymaster Hancock and Major Pierce for investigation and for presentation at the regular weekly meeting on Tuesday.

Lumber situation.—A discussion of the lumber situation took place, during which it was pointed out that Mr. Butterworth and his committee would probably not only consider procuring sufficient lumber for horse-drawn vehicles in all departments, but also lumber for cantonments, which subject was to be considered jointly with representatives of the Lumber Committee and by them decided whether recommendations would be made to the Quartermasters Department to purchase such lumber as requirements demand.

Colonel Hodgson stated that he was preparing data on the requirements of all of the Departments in this respect.

The meeting adjourned at 8:45 a. m.

CHESTER C. BOLTON, *Secretary.*

106 Minutes of Meeting of the General Munitions Board held Tuesday, April 24, 1917, at 9 a. m., in the Munsey Building

There were present: Gen. Thos. Cruse; Col. F. G. Hodgson; Col. H. Fisher; Lt. Col. J. E. Hoffer; Maj. P. E. Pierce; Maj. Chas. Wallace; Capt. A. B. Barber; Col. Blunt; Admiral W. S. Capps; Admiral H. H. Rousseau; Mr. Baruch; Mr. Eisenman; Commander R. H. Leigh; Commander T. A. Kearney; Dr. R. C. Holcomb; Paymaster J. H. Hancock; Lt. Col. W. B. Lemly; Mr. L. McH. Howe; Commander Gardner; Mr. F. A. Scott; Dr. Simpson; Dr. Martin; Mr. Summers; Mr. Rosenwald; Mr. Bolton, Secretary; Mr. Scott, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Discussion and action regarding appropriations.—Major Pierce was first asked to advise with reference to the action of Congress towards appropriations, and stated that while the deficiency bill had been passed and the regular appropriation bill of 1917 had passed the Senate and had been sent to Congress for action, many reductions had been made throughout the bill as originally proposed, and the situation was rather indefinite.

It was pointed out that until proper funds had been designated it would be impossible to execute contracts which are now drawn and ready, even though information was desired from the Board regarding the small arms and machine-gun forgings situation.
107 It was further stated that without proper financial appropriations energy was being wasted in endeavoring to expedite the manufacture and delivery of material.

Mr. Howe suggested that a resolution by this Board was in order to the effect that the President be given the power to direct the transfer of any funds from any specified purposes for which it is appropriated in this appropriation bill to any other specific appropriation provided therein, in case unforeseen military necessity arises, provided that funds appropriated for the Army may not be transferred

to the Navy nor from the Navy to the Army. Such motion was duly seconded and carried.

General Cruse pointed out that by statute contracting officials were forbidden to contract unless appropriations had been passed, and again called attention to the fact that the credit of the Quartermaster's Department had been very seriously impaired due to lack of proper appropriations. Permission to use funds from the general fund not covered by specific appropriations was called attention to and after some further discussion Dr. Martin presented the following motion:

Moved, That a Committee be appointed by the Chair, of which the Chairman of this Board shall be Chairman, to present recommendations to the Advisory Committee of the Council of National Defense defining the desirable authority this Board should possess, especially in regard to the fixing of prices, the letting of contracts, the adjusting of priority requirements, and its ability to recommend measures involving the use of appropriations that are available for the purchase of supplies for the Army and Navy and other recommendations that may seem desirable to define and strengthen the usefulness of this Board.

108 *Departmental Requirements and action resulting therefrom.*—The matter of submitting lists of Departmental requirements with a view to determining what articles required by the different departments were apt to cause conflict, in line with action of the Board on Friday, April 20th, next came up for discussion and a list of the army requirements was presented showing items on which there was most chance of conflict.

With reference to aluminum, which appeared among the list of items of raw materials, Mr. Baruch stated that an agreement had been made with Mr. Davis, representing the Aluminum Committee, which would be subject to the approval of the Board, and that the supply of the Army and Navy would be satisfactorily taken care of until this matter was definitely decided.

The Board entered into a general discussion on the subject of these requirements, during which Major Pierce quoted from the plan of procedure of the Munitions Board, and the order of the Secretary of War, dated April 12, 1917, was read.

The requirements of the several departments were presented, and after further discussion, Major Pierce moved that a committee be appointed to complete the list of requirements of both the Army and the Navy, and to present this matter to the Council of National Defense, recommending action in line with the order from the Secretary of War, dated April 12th, to the effect that in case of conflict the requirements should not be ordered until the matter had been presented to the General Munitions Board for decision.

109 Mr. Coffin commented on the fact that the Board should not trouble itself with minor details where no trouble existed, but only on serious matters, and that all purchase orders or requirements should be coordinated through this body.

Commander Kearney called attention to the fact that no definition of national policy since the outbreak of the war had been outlined, that an announcement of such policy was most essential, and that the President should state what was desired.

Commander Kearney suggested that the Board pass a broad resolution instead of a restrictive one with a view to learning what was desired.

Colonel Dunn stated that he believed it a mistake to have the Board's responsibility increased any more rapidly than it had machinery to accept such responsibility, and it was pointed out that it was very difficult in many cases to take all subjects up with this Board and receive prompt action. Mr. Scott stated that some spirit of accommodation was necessary for a few days and that either the Board would make itself responsible or the Board would be swept aside, and that a spirit of accommodation was called for that would probably result in having more power granted it than in having its power reduced.

Colonel Dunn stated that expanding the machinery of the Board meant the ability to settle questions, not merely to recommend; and that its authority should be legally delegated to it.

Colonel Fisher asked permission not to present everything to the Board for discussion, though the order of the Secretary of War stated that approximately such action was necessary.

110 In this connection it was shown that the Secretary's order stated that where time permitted only matters were to be referred to the Board.

Mr. Eisenman and Mr. Summers both spoke briefly on how the Supplies and the Raw Materials Committee could be of help to the different Departments in that all matters pertaining to supplies of the Army and Navy should be cleared through that Committee in order that they might be familiar with the requirements of the Department.

After some further discussion, Major Pierce's motion, being properly seconded by Commander Leigh, was voted upon and carried.

Commander Kearney then tendered his motion as outlined which, upon being properly seconded, was carried.

The Chairman appointed a committee consisting of Paymaster Hancock, Major Pierce, Dr. Martin, and Mr. Coffin to consider all of the resolutions mentioned above, and presented a draft incorporating all four and outlining in the preamble the essential points brought out in this meeting, such set of resolutions to be presented to the General Board meeting to be held Tuesday, April 26th.

It was requested that the form of resolutions be transmitted to each member of the Board, including the list of requirements, and the Secretary was ordered to see that this be done.

Forging Report.—Colonel Dunn reported verbally on conferences held with representatives of the Midvale and Bethlehem Steel Companies, with a view to developing additional sources of

111 forging and machining for big guns.

Colonel Dunn stated that the Midvale Corporation could arrange to furnish the Government with 5,000,000 pounds of additional forgings within a year but would expect to be paid for the loss of car-wheel business resulting therefrom, also an advance of $750,000 and a 10% increase in the price of forgings; that the Bethlehem Steel Company made the same proposition, except the loss of car-wheel profits.

Colonel Dunn advised that lack of definite information and the inability to make advance payments without specific appropriations made it impossible to offer a recommendation at the present time.

In connection with this matter, Mr. Howe advised that the Navy Department had learned from the Allis-Chalmers people that they would be in position to make forged shafts by increasing the facilities at their plant under a proposition which appeared advantageous to the Navy Department.

The Chairman suggested that Mr. Corwell be added to Colonel Dunn's Committee to negotiate with the Midvale and Bethlehem Steel Companies and that the Committee make recommendations on this subject for submission to the Chief of Ordnance.

Admiral Capps moved that the matter of recommendations be referred to Colonel Dunn's Committee with power; such motion being duly seconded, was carried.

Report received from Mr. Vauclain's Committee.—A report was presented from Mr. Vauclain's Committee, appointed to work out the question of increasing the capacity of the country for big-gun forging and machining, which report was ordered received.

112 *Raw Material—Quartermaster's Requirements.*—Mr. Eisenman spoke briefly on the necessity for cooperation of the various Departments with the committees of the Board, calling attention to the fact that if the Departments did not act with the various committees there would be loss of interest and action with the various manufacturers, and pointing out the desire to procure for the government what it wanted at just prices and in the quickest time. This could best be accomplished by the Government requirements being cleared through a central department as stated.

The action of the Quartermaster General in recently cancelling instructions of the various depots to purchase material required and referring this matter to the Council was commented on, and it was suggested that the various items for the Quartermaster's Department relating to the Committee on Materials and Supplies be referred directly to that Committee without presentation to the Board.

Such action was moved by Mr. Summers, seconded by Colonel Hodgson, and carried.

Raw Material—Lumber.—Colonel Hodgson called attention to the lumber and raw material required for cantonments, which subject it was suggested be referred directly to the Raw Materials Committee without presentation to the Board. Such action was moved, properly seconded, and carried.

Mr. Howe mentioned the lumber question in connection with material required for the merchant ships to be built under supervision of General Goethals, and it was similarly moved and passed

113 that this matter be referred to the Raw Materials Committee direct.

Raw Material—Rubber.—The matter of rubber required was also presented and referred to the Raw Materials Committee.

Requirements of the Quartermaster's Department.—Colonel Hodgson presented a list of contracts and contractors submitted by the Quartermaster's Department, together with the different amounts due on these contracts, which the Quartermaster's Department had been unable to procure as promptly as desired.

This matter was referred to Mr. Eisenman and to the Secretary with a view of arranging to have the subject properly followed up and relief obtained.

Requirements of Engineer Corps.—Capt. Barker presented a list showing the requirements and amounts required by the Engineer Department, amounting to about $2,000,000, and it was moved by Mr. Summers and seconded by Mr. Rosenwald that the Engineer Corps be instructed to proceed to purchase these requirements as promptly as possible, in view of the fact that negotiations for same were well under way, which action was carried.

Precedence of Orders.—Colonel Blunt reported that there was an apparent conflict in the requirements of the Army and Navy on machine-gun specifications from both departments, orders having been placed about the same time, and both departments desiring their allotment taken care of first.

It was pointed out that if the Navy order was supplied first the Army would be unable to have its order filled until July but that if the Navy order was put off until the Army order for 1,300

114 guns could be filled, the National Guard could be supplied in time for their requirements.

After some discussion the Chairman suggested that Colonel Blunt, Commander Kearney, and himself as chairman be appointed as a committee to dispose of the matter. This action was promptly carried.

Reduction in prices.—Colonel Blunt presented a communication from the Ordnance Department calling attention to the fact that that Department was unable to procure any reduction in the price of spare parts for Ford automobiles. This matter was referred to Mr. Coffin for attention.

Communication from Ordnance Department regarding prices.—Colonel Blunt presented several communications from the Ordnance Department relative to fair and just prices on ordnance requirements. This matter, upon motion properly carried, was referred to the Chairman and Colonel Blunt with power.

Raw Material—Cotton Duck.—Colonel Blunt presented a communication from the Ordnance Department relative to the requirements of that department for cotton duck and the quantities which the various mills have offered to supply. This matter was referred to Mr. Eisenman for attention.

Shipping Board Representative.—Mr. Scott advised that General Goethals had requested that his Department be represented on this Board and had asked that Admiral Rousseau act in that capacity. Motion to the effect was made, seconded, and properly carried.

The Chairman requested that the consent of the Board be

115 given him to extend an invitation to each committeeman of the General Munitions Board to attend any subcommittee meeting pertaining to his department. Such action was granted.

Memorandum from Mr. Gifford.—The Chairman presented a memorandum received from Mr. Gifford, which read as follows:

It was voted that Mr. Frank A. Scott be requested to form a committee, composed of himself as chairman, representatives of the Department of Commerce, Department of Agriculture, Department of the Interior, Federal Trade Commission, and others he might wish to select, to consult with Commissioner Baruch in the solution of the price problem raised in the foregoing communication.

List of subcommittees.—The Chairman presented a list of the subcommittees of the Raw Materials Committee, which was read, and the Secretary was requested to send a copy of such list to each member of the Board, as well as a list of all subcommittees of the General Munitions Board.

It was further requested that a notification of each subcommittee meeting of the Munitions Board, together with a résumé of the minutes of the daily meetings, be sent to each member of the Board. Such action was seconded and passed.

The meeting adjourned at 12 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

116 Minutes of Meeting of the General Munitions Board held Wednesday, April 25, 1917, at 8:15 a. m., in the Munsey Building

There were present: Colonel Hodgson; Colonel Dunn; Colonel Blunt; Major Pierce; Paymaster Hancock; Dr. Martin; Dr. Simpson; Mr. Coffin; Mr. Eisenman; Mr. Rosenwald; Mr. Summers; Mr. Scott; Mr. Bolton, Secretary. Mr. Scott presided.

The reading of the minutes of the previous meeting was dispensed with.

Communication from the Ordnance Department.—Mr. Scott presented a communication from the Ordnance Department relative to an inquiry made to the Ordnance Department on the matter of nickel being specified for artillery stirrups and snaffle bits.

This matter was referred to Colonel Blunt, and it was further requested that Mr. Summers submit a memorandum showing the situation in the supply of nickel, both references being made with a view to determining whether it is essential to specify nickel under present conditions.

Communication from the Navy Department regarding wrought-iron pipe.—The Secretary presented a memorandum received from the Commission on Navy Yards and Naval Stations asking whether any action had been taken relative to reasonable prices and deliveries of wrought-iron and cast-iron pipes.

117 This matter was ordered referred to Mr. Summers, of the Raw Material Committee, for advices.

Communication from the Manufacturing Chemists Association.—A letter from the Manufacturing Chemists Association was presented commenting on the toluol-oil situation and calling attention to the fact that there was no reason for that association to appoint a committee on that subject if the Raw Materials Committee under Mr. Baruch had formed such a committee.

This was agreed to by the Board, and in connection with this communication Colonel Dunn was requested to discuss the matter with Mr. Summers and Mr. Baruch relative to the committee availing itself of the services of Dr. Nichols.

Communication regarding the Westinghouse Rifle-Barrel Plant.—A letter received from Mr. VanDervoort, calling attention to the fact that the rifle-barrel plant of the Westinghouse Company has been ordered to vacate the premises which they now occupy, owing to street extension, was presented at the meeting, and while it was the

sense of the meeting that such action would not affect the rifle situation in general, the matter was referred to Colonel Blunt for investigation.

Communication from the Ordnance Department regarding Major Jameson.—The Chairman presented a communication received from General Crozier advising that Major C. C. Jameson had been designated to represent the Ordnance Department in connection with the perfecting of the necessary plans for the procurement of the finished guns and forgings therefore included in the present projects

118 of the War Department, and further stating that Major Jameson would cooperate in this matter with Colonel Blunt.

Communication from the Ordnance Department regarding estimate on raw materials.—The Chairman presented a communication from General Crozier giving an estimate of the quantity of copper, zinc, and nickle that would be required by the Ordnance material covered by the estimates now being considered by Congress.

This report was further received and information ordered transmitted to Mr. Summers, of the Raw Materials Committee.

Communication from the Ordnance Department relative to forgings.—Paymaster Hancock presented a memorandum showing the proposed contract with the Allis-Chalmers Company relative to increasing their capacity for naval forgings.

Raw Material—Cotton.—The Chairman presented a letter received from the National Board of Fire Underwriters regarding the cotton situation, calling attention to the fact that this commodity was the least guarded but of the highest fire risk, and that in view of this fact the plans of some of the more important cotton warehouses was being furnished to the Secret Service and the Generals in command of the different parts of the army.

This communication was ordered received and filed.

Resolution for the Advisory Council.—Mr. Coffin presented for the committee a draft of resolution to the Board for their approval.

The first Resolution is as follows:

119 *Resolved*, That the Advisory Commission recommend to the Council of National Defense that the Council urge upon Congress the desirability of incorporating in all appropriations for the National Defense a clause granting to the President for the duration of the war power of transfer of funds from the specific uses stated by Act to such other purposes as may in his opinion be more essential to the national security and welfare.

Upon motion by Mr. Eisenman and seconded by Major Pierce, this resolution was adopted as the sense of this meeting and was ordered to be submitted to the Advisory Council for action as outlined.

The second resolution was presented as follows:

Whereas in the work of the General Munitions Board it has become increasingly evident that a broadening of the scope and authority of this body is essential to the efficient operation of the Board and to the best interests of the Governmental Departments; and

Whereas it is necessary that the Council of National Defense more clearly define the authority of this Board in regard to the fixing of prices, the letting of contracts, the adjustment of priority requirements, and such other matters as are involved in the procurement of supplies: Now, therefore, be it

Resolved, That the Advisory Commission recommend to the Council of National Defense:

(1) That the General Munitions Board prepare and maintain a list of all materials and finished products in the procurement of which industrial limitation appears imminent and coordination of action appears to the Board to be

essential. And in connection with materials and finished products thus listed, no proposals or purchase orders shall be issued by any department until submitted for clearance to the Board, except in case of emergency, in which event prompt report of such purchase shall be made to the Board.

120 (2) That the General Munitions Board shall exercise full power in the determination of priority of delivery in materials and finished products in accordance with the general policy of the Government as it may be determined and annunciated by the President.

(3) That the General Munitions Board be accorded full power by the Secretaries of War and Navy Departments to determine what are fair and just prices to be paid by the Government for materials and finished products when called upon to do so by any bureau or department head.

After some discussion, during which Mr. Eisenman spoke on the need of a central bureau in the army and navy departments being necessary to properly coordinate all the requirements of the various departments, it was moved and seconded that this resolution be adopted and be submitted to the members of the Board for their attention and for consideration at the general meeting of the Board to be held Thursday, April 26th. Such motion was carried.

A third resolution pointing out that " it is essential to the accomplishment of effective work upon the members of the General Munitions Board that a definite governmental policy, relative to certain forms of preparation to be defined ", was discussed and ordered held by the Secretary, until the result of the conference between the representatives of the British, French, and our own Government could be known, and then be presented to the Board for such action as it might see fit to take.

121 *The Committee on drafting resolutions regarding specific information required by the Board.*—During the discussion of the 3d resolution presented and mentioned above, Colonel Dunn pointed out that some action was essential relative to certain specific questions and policies that must be determined in order that the Board may proceed intelligently in its work, and the Chairman suggested the appointment of a committee consisting of Major Pierce, Paymaster Hancock, and Mr. Coffin, and himself, to draft a resolution covering such questions, and present same to the Secretaries of the War and of the Navy.

Such action was authorized, at the same time each member of the Committee was asked to prepare questions pertaining to the policy of the Board and to the intelligent work, which questions should be submitted to the Chairman for consideration in connection with the above committee.

Communication regarding price of Vicker's Machine Gun.—A communication from Mr. Skinner, President of the Colt Arms Company relative to the price of 4,000 Vicker's machine guns which the army contemplated purchasing, was read by the Secretary. This communication offered a reduction of $25.00 on each gun but not on the tripod necessary or $100,000 on the number of guns in question.

After a short discussion Colonel Blunt moved that the price of $725 for each gun complete, be considered fair and just, and the Chief of Ordnance so advised.

Such motion was seconded by Major Pierce and properly carried.

122 *Frankfort Arsenal.*—Colonel Blunt presented a communication from the commanding officer of the Frankfort Arsenal relative to procuring steel for work now under contract at that arsenal. It was suggested that Colonel Blunt advise the Commander of the Arsenal that no advantage for Frankfort Arsenal is operative under the present steel arrangement, and such action was carried.

Communication from Ordnance Department relative to powder orders.—The Chairman presented a communication from Colonel Hoffer advising that an order for smokeless powder for cannons had been placed with Messrs. E. I. Du Pont de Nemours Co., which communication was ordered accepted and filed.

Aluminum.—A communication from Mr. Davis, chairman of the Aluminum Committee was presented, offering to supply aluminum sufficient to furnish the articles of three million equipments for the various departments and bureaus of the Government at a price of 27½¢ per pound, this price being based on aluminum ingots.

This memorandum was ordered received and filed, and the Secretary was further instructed to send a copy of this communication both to Paymaster Hancock and Colonel Hodgson.

Precedence of Orders, Forgings.—Paymaster Hancock presented a memorandum from the Bureau of Steam Engineering, Navy Department, calling attention to the conflict between orders placed by the Bureau of Ordnance, and the Ordnance Department of the Army, on gun forgings ordered from the Bethlehem Steel Company.

This matter was referred to Mr. Scott with power to act.

123 *Report of Committee on method of determining costs.*—Mr. Scott presented a memorandum drawn by the Committee appointed on the method of determining costs and the method of payment, outlining the committee's ideas as to the determination of prices as follows:

That whenever experience or public or competitive quotations make it possible for the Department to be assured of the reasonableness of the price, a straight-price method is to be preferred.

In certain cases where a flat price cannot be agreed upon, it is suggested that a cost-plus percentage basis be followed, the method of figuring cost to be the one laid down in the present law providing for the payment of a munitions tax.

In cases where it is desirable to use the cost-plus percentage basis, but where the Government and contractor are already aware of a fair average cost for producing the article, the method might be cost-plus percentage, providing that if the cost falls below the average amount prescribed the contractor shall receive half of the saving. If the cost passes above the amount prescribed, half the excess will be deducted from the contractor's percentage of profit.

After some discussion it was moved that specific contracts based on the reports be drawn after legal and statistical advice had been received and presented for consideration.

The meeting adjourned at 10:30 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

124 Minutes of Meeting of the General Munitions Board held Thursday, April 26, 1917, at 8:30 a. m., in the Munsey Building

There were present: Gen. Cruse; Col. Hodgson; Maj. Pierce; Maj. Wallace; Capt. Barber; Col. Dunn; Col. Blunt; Admiral Rousseau; Admiral Capps; Mr. Eisenman; Mr. Coffin; Mr. E. A. Deeds; Commander Leigh; Commander Kearney; Dr. Holcomb; Paymaster Han-

cock; Lt. Col. Lemly; Mr. Howe; Lt. Commander Gardner; Mr. L. L. Summers; Mr. Scott; Mr. Rosenwald; Dr. Martin; Admiral A. V. Zane; Mr. Scott, presiding; Mr. Bolton, secretary.

The reading of the minutes of the previous meeting was dispensed with.

Raw material—Toluol oil.—Mr. Summers reported verbally relative to the committee formed on toluol oil by the Manufacturing Chemical Association, showing that it was impracticable for the Raw Materials Committee to work with the Chemical Association Committee, but that it would be better to refer the matter to a committee dealing with toluol oil, but made up of coke manufacturers, etc., who were more familiar with the raw material situation, and that it would be more preferable to have an acid committee independent of the manufacturers of chemicals.

Mr. Summers further reported that the services of Mr. Nichols would be at the disposal of the Raw Materials Committee.

125 *Raw Materials—Lumber situation for vehicles.*—The Chairman stated that he had received a verbal report from Colonel Baker regarding the conference held yesterday with horse-drawn vehicle manufacturers, stating that the conference was very satisfactory; that arrangements had been made for the quantity of spokes required, as outlined in the plan embodying one million men or even double that amount, if necessary; and that the entire supply for the Government would be secured, stored, and properly insured, these requirements including spokes necessary for artillery wheels.

Resolution for Advisory Council.—The resolutions presented at the meeting of the Board held yesterday were discussed and after some slight modification, upon motion by Major Pierce, seconded by General Cruse, the following resolution was passed:

Whereas in the work of the General Munitions Board it has become increasingly evident that a broadening of the scope and authority of this body is essential to the efficient operation of the Board and to the best interests of the Governmental Departments; and

Whereas it is necessary that the Council of National Defense more clearly define the authority of this Board in regard to the fixing of prices, advising as to the form and terms of contracts, the adjustment of priority requirements, and such other matters as are involved in the procurement of supplies: Now, therefore, be it

Resolved, That the Advisory Commission recommend to the Council of National Defense:

(1) That the General Munitions Board prepare and maintain a list of all materials and finished products in the procurement of which limitation appears imminent and coordination of action appears to the Board to be essential. And in connection with materials and finished products thus listed no proposals or purchase orders shall be issued by any department until submitted for clearance to the Board, except in case of emergency, in which event prompt report of such purchase shall be made to the Board.

126 (2) That the General Munitions Board shall exercise full power in the determination of priority of delivery in materials and finished products whenever there is a conflict in delivery, in accordance with the general policy of the Government, as it may be determined and annunciated by the President.

(3) That the General Munitions Board be accorded full power by the Secretaries of War and Navy Departments to advise as to the form and terms of contracts, and to determine what are fair and just prices to be paid by the Government for materials and finished products, when called upon to do so by any bureau, board, or department head.

Thereupon, the Chair submitted a draft of the resolution, as presented at yesterday's meeting, regarding the power to transfer funds, and upon motion of Colonel Hodgson, seconded by Admiral Rousseau, the following motion was adopted:

Resolved, That the Advisory Commission recommend to the Council of National Defense that the Council urge upon Congress the desirability of incorporating in all appropriations for the national defense a clause granting to the President, for the duration of the war, power to transfer funds from the specific uses stated by Act to such other purposes, within any Department, as may, in his opinion, be more essential to the national security and welfare.

Both of the above resolutions were passed with the understanding that copies of each be transmitted to the Advisory Commission.

Precedence of Orders.—Colonel Blunt presented a memorandum, submitted to the Chief of Ordnance by Commander Kearney, outlining the result of a conference between Commander Kearney and Colonel Blunt, as to the precedence to be given orders for Lewis machine guns placed with the Savage Arms Company by the Ordnance Department and the Bureau of Ordnance.

127 Such action, a ssuggested in the memorandum, was agreed to by the Board, and upon motion properly carried it was requested that the action of the Board be transmitted to the Chiefs of both of the Departments concerned.

Resolution regarding a definite governmental policy.—Resolutions with reference to defining a governmental policy were presented by the Chairman, and it was moved by Mr. Summers and seconded by Colonel Dunn, that the resolutions as outlined be accepted, i. e.:

Whereas it is essential to the accomplishment of effective work upon the part of the General Munitions Board that a definite governmental policy with regard to the relative importance of certain forms of preparation be defined: Be it therefore *Resolved*, That the Advisory Commission urge upon the Council of National Defense the necessity of the earliest possible determination of a general policy which will establish the relative importance of the following: (a) Supplies for the belligerents friendly to ourselves; (b) Supplies required by the Navy; (c) Supplies required by the Army; and (d) Construction of one thousand standardized freight carriers.

An amendment was offered to the effect that certain questions, answers to which are essential to proper preparation, be appended to the motion. The questions are as follows:

128 (a) Are the United States' forces to be united with the English, French, and Russian Forces?

(b) Are our rifles and machine guns to be equipped to use the same ammunition as the English?

(c) Shall our artillery be of the same make and calibre as the English?

(d) If our artillery is of a different make and calibre than the English is it this Government's intention to locate shops in France and England?

(e) Are we going to establish our own munition transport service?

After some discussion the amendment, upon motion properly made and carried, was passed with the understanding that the questions were to be appended to the resolution. The resolution as offered was then put before the Board and carried.

Raw Material—Cotton Duck.—The subject of personal equipment of the army was next discussed with particular reference to cotton goods for haversacks. After some discussion the matter was referred to Colonel Hodgson to confer with Colonel Babbitt of the Ordnance Department.

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Precedent of Orders—Spanish.—Mr. Howe presented a request from the Spanish Ambassador asking that the delivery of 250,000 boiler tubes be expedited.

During the discussion it was pointed out that Dr. Pratt of the Commerce Department also had this matter under investigation.

The report of Mr. Howe was ordered accepted and referred to the Secretary of the Munitions Board to learn from Dr. Pratt just what the situation was on this matter.

129 *Communication from the Bethlehem Steel Co. regarding coal shortage.*—A communication was presented from the Bethlehem Steel Co., relative to the shortage in coal being experienced at the Bethlehem Steel plants, calling attention to the fact that approximately only 50% of the tonnage needed was being shipped, and that it was very necessary that help be secured in this matter in order to procure the proper tonnage of coal to permit of furnishing steel for munition manufacture.

In connection with this matter Mr. Scott reported that the same situation relative to coal shortage, threatened the two plans of the DuPont people, and that the Ordnance Department had finally notified the Pennsylvania Railroad that coal must be delivered to these plants as it was essential to the requirements of that Department.

Mr. Summers also commented on the coal situation throughout New England, calling attention to the fact that the shortage of this commodity in that locality was working very great hardships on the cotton and woolen mills which are very necessary to Government requirements at this time.

This matter was ordered referred to the Secretary with instructions to communicate with the Interior Department through its Secretary, advising of this shortage not only at the Bethlehem Steel plant, but also at the two plants of the DuPont Company, and further with reference to the New England situation at the cotton and woolen mills. The Secretary was further requested to refer the Bethlehem Steel Co. problem to Mr. Hodges of the Transportation Committee, at the same time reporting this matter to the Raw Materials Committee.

130 *Raw Material—Nickel.*—A communication from Mr. Baruch was presented to the Board, advising relative to the price arrangement for the supply of nickel for government use.

This report was ordered accepted, and copies of same to be sent to representatives of the Army and the Navy.

Communication from the Ordnance Department.—Colonel Blunt presented a communication from the Ordnance Department addressed to the various Arsenal Commanders throughout the country, relative to the steel situation, advising that the United States Steel Corporation had made arrangements through the American Iron and Steel Institute to furnish steel to the United States Government at special prices, and suggesting that the different commanding officers take advantage of the above arrangements.

The matter was ordered referred to Mr. Summers for investigation.

Raw Material—Monell Metal.—The matter of price of natural Monell metal was discussed and the subject ordered referred to Mr. Summers for reference to Mr. Howe.

Labor.—The situation confronting manufacturers relative to the eight-hour restriction, as outlined by law, was entered into and a general discussion took place. While it was pointed out that this matter was one of vital importance not only to the Munitions Board but to the United States, no action was taken in view of the fact that the entire situation was to be discussed at the meeting of the Advisory Commission held today.

131 *Method of Determining Costs.*—The report of the Committee submitted at yesterday's meeting, regarding the determining of costs, was considered; and after some discussion it was moved by Mr. Summers, and seconded by Paymaster Hancock, that the memorandum of methods suggested at yesterday's meeting be tentatively approved, with the understanding that when the sample contract ordered prepared at yesterday's meeting was read, same was to be submitted to the Board for such modification as might develop.

The meeting adjourned at 11:30 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

132 Minutes of Meeting of the General Munitions Board held Friday, April 27, 1917, at 8:15 a. m., in the Munsey Building

There were present: Col. Hodgson; Col. Dunn; Col. Blunt; Major Pierce; Paymaster Hancock; Mr. Summers; Mr. Rosenwald; Mr. Bolton, Secretary; Mr. Scott, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Prices—Suggested coordination in purchase of machine guns.—Mr. Scott presented drafts of letters, which he suggested be submitted to the Secretaries of the Army and the Navy, regarding Lewis Machine Guns, in which letters some coordination in purchases in the future was recommended.

Prices—Notification of suggested forms of contract.—He also presented drafts written to the Secretaries of the Army and Navy advising of several forms of contracts covering methods of purchase other than the straight price basis, which were being prepared by this Board as a result of a conference held with the Federal Trade Commission.

The Board approved the sending of the letters submitted.

Committee of Engineers and contractors for standardizing day-work contracts.—A report from Mr. M. C. Tuttle was presented to the Board calling attention to the fact that within a short time many Government Departments would let rush contracts and suggesting a committee to draw up a workable form of day-work contract. This matter was discussed, and the Chairman suggested forming a

133 committee composed of Mr. Tuttle, Mr. C. W. Lundoff, and Mr. Starratt, along the lines suggested in Mr. Tuttle's report. Upon motion properly seconded, such action was carried.

Draft submitted on price problem.—Mr. Scott read a memorandum prepared by himself and also one drafted by Mr. Allen, to be presented to the Secretaries of the various departments who were to

hold a conference this morning relative to the future economic conditions of the country, and to the price problem in general.

The recommendations suggested in both drafts were commented upon favorably by the Board.

Communication from the Signal Corps regarding cylinders.—A memorandum from Major Wallace asking that permission be granted to purchase seamless hydraulic cylinders at the price that seemed reasonable to the Signal Corps was presented to the Board and the matter referred to Paymaster Hancock to investigate whether such action did not interfere with the requirements of the Navy, and if the price indicated was reasonable. The Board authorized Major Wallace's request, provided this matter as reported had been favored by Paymaster Hancock.

Communication on the manufacture and development of wireless.—A report written by Mr. E. D. Ewing, of the Crocker-Wheeler Company, was presented to the Board for its consideration, such report dealing with the necessity of having a committee appointed to superintend the manufacture and development of wireless apparatus in this country.

This matter was referred to the Department of Steam Engineering and to the Signal Corps to investigate and report to the Board.

Copies of this report were ordered sent to both Departments.

134 *Communication from the Petroleum Iron Works.*—A communication from Mr. George P. Bard, President of the Petroleum Iron Works, was presented, in which communication assistance was asked in procuring steel from the American Sheet and Tin Plate Company in order that requirements for both the Navy Department and the Panama Canal requiring immediate attention, requirements from the Standard Oil Co. and the Quartermaster's Department at Governors Island which were immediate, be expedited.

This matter was referred to the Chairman and Mr. Summers with a suggestion that letters be drawn up addressed to the Secretaries of Commerce and of Agriculture relative to requesting the manufacturers of steel sheets to continue to supply the necessary raw material to manufacturers of articles necessary for Government purposes, either directly or indirectly.

Communication from the Naval Consulting Board regarding optical work.—Mr. Scott presented a communication received from Dr. Baekeland recommending that the problem of the manufacture of optical glass be left under the special direction of the Bureau of Standards, that cooperation with manufacturing establishments should be carried out and that an additional allotment of at least $75,000 should be granted the Bureau of Standards for advancing this work.

A motion was offered to the effect that a letter be written to the Advisory Commission suggesting action be taken as outlined in Dr. Baekeland's letter, which motion was properly carried.

135 *Prices—Tentative form of contract for the manufacture of cartridges.*—A letter from Mr. Otterson, of the Committee on Small Arms and Ammunition, was presented, together with a tentative draft of the proposed contract for the manufacture of cartridges.

This matter was referred to Colonel Blunt with power.

Reports Received.—There were presented to the Board the following reports, all of which were ordered received:

(1) Minutes of meeting of 3″ Shrapnel Manufacturers held April 13th, 1917.

(2) Minutes of meeting of 3″ High Explosive Shell Manufactures held April 14th, 1917.

(3) Minutes of meeting of manufacturers of forgings for 3″ Shrapnel and Shell held April 16, 1917.

(4) Minutes of conference of Manufacturers of Detonating Fuses held April 18, 1917.

(5) Minutes of conference of small arms held at the office of the Remington Arms Company, April 18, 1917, and ordered referred to Colonel Blunt with power, and requesting him to confer with the Navy Department on this subject.

(6) Conference with manufacturers of smokeless powder held April 20th. In this report it was recommended that the General Munitions Board inform the Chief of Ordnance whether it considered the prices indicated in this report fair and just.

After discussing this matter it was moved and seconded that the prices did appear proper and that the Ordnance Department be notified accordingly. Such action was carried.

136 (7) Reports of conference held with representatives of the Bethlehem Company and the Washington Steel & Ordnance Co., regarding the manufacture of armour piercing shot and shell and outlining prices and method of payment on the various size projectiles which were recommended to be accepted as a fair and just method of compensation.

Decision on this matter was ordered held until the meeting on Monday, April 30th, at which time the Secretary was requested to present to the Board a report showing the amount of money and the number of projectiles involved in the proposed purchases.

Communication from Colonel Blunt.—Colonel Blunt presented a memorandum requesting information as to the reliability of the Meurer Metal Products Co., of Brooklyn, N. Y., who had suggested a proposition on cartridge cases, which proposition was considered unusually low and which company the Ordnance Department wished properly investigated before deciding to deal with them.

The secretary was requested to present such information to the Board on Monday.

There being no further business, the meeting, at the suggestion of the Chairman, adjourned at 9:45 until Monday, April 30, 1917.

CHESTER C. BOLTON, *Secretary.*

137 Minutes of Meeting of the General Munitions Board held Monday, April 30, 1917, at 8:15 a. m., in the Munsey Building

There were present: Col. Hodgson, Col. Blunt; Col. Latelle: Maj. Pierce; Paymaster Hancock; Mr. Rosenwald; Mr. Scott; Mr. Bingham, Assistant Secretary; Mr. Scott, Presiding.

The reading of the minutes of the previous meeting was dispensed with.

Prices—Ordnance.—It was suggested that the Ordnance requirements of the Navy be secured and in this way possible price con-

cession from manufacturers might be had because of the volume of material when combined with army requirements.

Mr. Scott stated that due to prices for army requirements having already been approved by the board such further action was unnecessary.

Delay in placing certain Quartermaster's requirements.—Major Pierce stated that General Smith was of the opinion that the holding up of certain items from lists submitted covering Quartermaster's supplies, particularly blankets, underwear, etc., by action of the Board would make it impossible to secure the necessary requirements for new army.

Colonel Hodgson stated that the holding up of the items mentioned would rather expedite matters than delay them due to modifications in specifications covering these items which were to be brought about.

138 Further, the items held covered the upkeep equipment and not the initial equipment. Major Pierce was asked to bring this point to the further attention of General Smith.

Method of purchasing by Quartermaster's Department.—Major Pierce stated that Mr. Eisenman's Committee advised that it would be better not to advertise for bids because of the large amount of supplies involved, which, if handled by bids, would tend to advance prices unduly.

Colonel Hodgson stated that Mr. Rosenwald's committee had this matter in hand and should not be disturbed, the plan being to get prices from the largest companies and refer to the Philadelphia Quartermaster's Department for purchase.

Paymaster Hancock stated that the Navy is well fixed in connection with blankets, underwear, etc., but may be forced into market later.

Price on Duck.—Colonel Blunt stated that Colonel Babbitt had informed all arsenals relative to the arrangements made concerning duck and stated that these prices were lower and the deliveries better than had been anticipated. He further stated that there had been considerable delay in arriving at a decision regarding dyed duck. Mr. Scott stated that such delay had been due to the manufacturers not being as prompt as was hoped for in securing necessary figures and was not due to any lack of diligence on the part of the Committee in charge.

Report on Philadelphia rifle-barrel plant of Westinghouse Co.—Colonel Blunt reported that the rifle-barrel plant, it is believed, will not be required by any of the manufacturers, who will probably have contracts for rifles, nor will it be needed by the Government establishments.

139 This report was ordered accepted and the matter dismissed.

Method of buying limbers, caisson, and artillery wheels.—Colonel Blunt stated that Mr. Walter Schlutter, of the firm of P. Schlutter Sons, Chicago, Ill., had called on him and expressed the desire to furnish wheels for artillery vehicles and also limbers and caissons for field artillery.

Mr. Scott then stated that Sir Hardman Lever, of the British Commission, had told him that the British Government was now buying limbers from vehicle manufacturers and not from gun manufacturers, as had been the custom. This had resulted in extreme reduction in cost. To do this it had been necessary to have the specifications modified, and Mr. Scott requested Colonel Rice and Mr. Crowell to act as a committee to investigate this question.

Adjustment of rifle contracts.—Mr. Scott stated that certain adjustments to be negotiated with the British Government concerning the manufacture of British rifles for the United States had been referred to him by the State and Ordnance Departments for attention. He will report further to the Board when the negotiations are completed.

Minutes of meeting of Committee on Petroleum industries held April 23d.—These minutes were presented and passed for record.

Schedule of Material for Russian Standard 3 G. T. detonating fuses.—A report was submitted from the committee having this matter in charge covering material for one million Russian standard 3 G. T. detonating fuses, which was accepted.

Report on Boiler Tubes requested by the Spanish Ambassador.—A report on this subject by the Secretary of the General Munitions Board was submitted and accepted, with the understanding

140 that the delivery of these tubes not be expedited.

Report on expediting of Lucas boring machine.—The Secretary's report on this subject was presented and accepted, with the understanding that the matter had been satisfactorily settled and that the boring machine in question, ordered by the Bureau of Steam Engineering, would be furnished with the desired speed.

Report on Parts for Ford trucks.—Mr. Howard E. Coffin submitted a report suggesting that any future contracts with the Ford Company should provide that agent's prices on contracts and parts be stipulated and, further, that a copy of the General Munitions Board's decision be sent to the Ford Company by the Ordnance Department. This was favorably acted upon.

Change in subjects assigned to Messrs. Vauclain and VanDervoort.—In order that greater convenience and effectiveness in the work designated to Mr. S. M. Vauclain and Mr. W. H. VanDervoort and their respective committees may be obtained, it has been decided to change the subjects of these committees, as follows:

Mr. Vauclain—Army and Navy Artillery.

Mr. VanDervoort—Army and Navy Projectiles, excepting fuses and detonators.

Cantonment.—Regarding lumber for cantonments, Colonel Hodgson suggested that the largest lumberman should be notified to come here to go over the situation and in this way insure a saving both as to prices and deliveries.

Mr. Scott stated that Mr. Baruch was handling this through timber associations and had the matter well in hand.

141 Colonel Hodgson further stated that it would be advisable to have the Quartermaster General let all the cantonments to the largest contractors rather than that the officers in charge of each separate cantonment should let them individually.

The sense of the meeting was in favor of this method, and Mr. Scott stated that instructions would be given to the Committee now working on Cantonment contract form to assist the Q. M. G. in carrying out the plan suggested.

Committee on Drawing Type of Contract for Cantonment Contractors.—This committee has as yet no progress to report and was ordered to submit their report on Wednesday or Thursday of this week.

Cantonment Sites.—Colonel Littell spoke of need for immediate action on location of cantonments, calling attention to the fact that already some confusion had arisen as to whether the divisional commanders were to pick the sites in their separate divisions or whether this would be done from the War College.

Major Pierce explained the status of this question, and action by the Board was not taken at this time.

General Order #49, War Department.—The following general order #49 was read for the information of the Board:

WAR DEPARTMENT,
Washington, D. C., April 12, 1917.

ORDERS

1. It is hereby declared that an emergency exists within the meaning of section 3709, R. S., and other statutes which except cases of emergency from the requirement that contracts for and on behalf of the Government shall only be made after advertising, as to all contracts under the War Department for the supply of the War Department and the supply and equipment of the Army and for fortifications and other works of defense; and until further ordered such contracts will be made without resort to advertising for bids in the letting of the same.

2. Where time will permit, information will be given to the Munitions Board constituted by the National Council of Defense, through the supply bureaus' representative, of orders to be made for supplies, with the view of assistance from the board in placing the orders and in order that the supplies of the War Department may be coordinated with those of the Navy and other executive departments and secured at prices not in excess of those paid by other departments.

141-A 3. It is to be understood, however, that the responsibility of the several supply bureaus for promptly supplying the needs of the Army must be recognized; and where time will not admit of the delay involved in consulting the Munitions Board, the supply bureaus will retain their present initiative in contracting without reference to the board.

NEWTON D. BAKER, *Secretary of War.*

The meeting adjourned at 10:15 a. m. o'clock.

———— ————, *Assistant Secretary.*

142 Minutes of Meeting of the General Munitions Board held Tuesday, May 1, 1917, at 8:30 a. m., in the Munsey Building

There were present: Rear Admiral Capps; Dr. Martin; Colonel Dunn; Colonel Blunt; Colonel Fisher; Colonel Hodgson; Major Pierce; Paymaster Hancock; Major Wallace; Commander Leigh; Capt. Barber; Rear Admiral Zane; Commander Kearney; Mr. Rosenwald; Mr. Eisenman; Dr. Holcomb; Mr. Howe; Gen. Cruse; Lt. Col. Lemly; Mr. Summers, representing Raw materials committee; Rear Admiral Rousseau; Mr. Scott, presiding; and Mr. H. P. Bingham, Assistant Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Report on resolution regarding priority of orders.—The Chairman presented a report from the Director of the Council of National Defense in reply to resolution adopted by the General Munitions Board on April 26th, inquiring as to a definite policy regarding priority of orders.

(a) As to supplies for the belligerents, the question of priority in each instance should be determined by the representatives of the particular belligerent and the head of the Department interested.

(b and c) That as between the Army and Navy, priority should be given to such needs of the Navy as are now to be completed within a period of one year.

143 (d) That the wooden-ship program should be pressed forward to the exclusion of all else not immediately and vitally necessary.

The Chairman likewise presented a report from the Director of the Council of National Defense in relation to resolution adopted by the General Munitions Board on April 26th regarding the further definition of authority of the Board, stating that paragraphs 1 and 2 of this resolution were adopted by the Council.

Paragraph 3: It was the sense of the meeting that the recently appointed committee on prices, of which Mr. Scott is chairman, should first consider the matter and report to the Council recommendations as to the policy to be adopted.

The Chairman stated that as the question was covered by an order of the Secretary of War bearing on this subject the matter could be dismissed.

List of items on which shortage already exists or is probable.—A. resolution was adopted stating that the following articles should not be ordered by the Departments before first consulting the General Munitions Board:

Gun and shafting forgings	Sheet tin
Steel Castings	Lumber
Acids	Wrought-Iron Pipe
Steel Sheets	Raw rubber
Leather goods	Rubber goods in quantity
Machine guns	Coal in quantity
Cotton goods	Gasoline in quantity
Woolen goods	Oil in quantity
Knit goods	

In the letting of general contracts where subcontractors are required to furnish any of the above items, the Board's attention should also be first brought to the subject.

144 The above action does not apply to contracts already let and relates only to orders in quantity.

Inquiries relative to above should be filed through Paymaster J. H. Hancock of the Navy, or Major Palmer Pierce of the Army.

Fixing of price.—The following resolution was adopted:

Resolved, That all questions regarding prices be laid before a general meeting of the Board, except in cases where specific power is delegated by the Board. However, in case of emergency the Chairman may be, and he is hereby, empowered to appoint committees to fix specific prices.

In order to clear the quantities of the items enumerated, Mr. Eisenman, of the Committee on Supplies, was authorized, together

with a competent purchasing officer of the Government, to enter into contracts which are below enumerated:

Cotton Colt, O. D	13,000,000
Drawers, wool	1,100,000
Gloves, wool, O. D., pairs	301,856
Shoes, Russet, pairs	1,018,270
Stockings, wool, light weight	1,750,000
Undershirts, cotton	765,000
Undershirts, wool	765,000
Blankets	854,860
Cots	761,656
Duck, shelter tent, yards	2,775,000
Duck, khaki, 12.4-oz., yards	9,500,000
Drilling, unbleached, yards	930,000
Duck, #4, 42", yards	137,500
Duck, khaki, 8-oz., yards	1,750,000
Flannel, shirting, O. D., yards	2,000,000
Meltons, O. D., 16-oz., yards	2,412,500
" " 30-oz., yards	1,675,000
Bobbinette, 72", yards	2,260,000
" 52", yards	2,300,000

and such other quantities of the above items as may have been previously authorized but not purchased.

145 *Blankets for medical requirements.*—Colonel Fisher then inquired as to whether the medical requirements for blankets had been included in the negotiations which Mr. Eisenman was about to consummate. Mr. Eisenman reported that they were not now included but that he had this matter in hand, to be taken up immediately.

Prices on Naval Shells.—A schedule of prices for Naval shells was submitted to the Board for consideration. The following resolution was offered and unanimously carried:

Resolved, That in the opinion of the Munitions Board the prices quoted by the Midvale and Crucible Steel Companies as brought to the attention of this Board, for certain specified calibres of Navy Armor Piercing Shell, are fair and just in view of the immediate, pressing necessity.

And it is recommended that the same be accepted, as the need for this type of shell is sufficiently great to warrant the immediate placing of contracts, in the opinion of this Board.

A copy of this resolution was ordered sent to the Secretary of the Navy.

Need for doctors and ambulances in France.—Dr. Martin presented the subject of the acute need for medical officers in France and stated that six units of 200 each were leaving for France on Saturday next. In addition to the six base hospital units, we are asked to furnish 200 doctors a month thereafter.

Dr. Martin further spoke of the immediate necessity in France for 2,400 ambulances, which were desired within three weeks.

After some discussion it was moved, as these conditions had been put before the Secretary of War, the Chief of Staff, and the
146 Surgeon General, it would be proper for this Board to appoint a committee to assist in arranging for the purchase of the ambulances required in France, calling the attention of the Secretary of War to the fact that there are now no funds available for this purchase.

The Chairman appointed the following Committee to take up the matter: Major Pierce, Col. Fisher, Mr. E. A. Deeds, and Mr. Coffin.

Rear Admiral Capps then presented the following resolution:

Resolved, That the General Munitions Board respectfully request the Council of National Defense to define the policy of our Government in regard to forwarding work on cargo-carrying ships now under contract in American yards for American or foreign owners.

This resolution was duly adopted and ordered sent to the Council of National Defense.

Report from Navy Department.—A report from the Navy Department covering manufacture and development of wireless was presented and ordered adopted as action of the Board, and the Secretary was instructed to send a copy of the report to Mr. Ewing.

The meeting adjourned at 10:30 a. m., o'clock.

———, *Assistant Secretary.*

147 Minutes of Meeting of the General Munitions Board held Wednesday, May 2, at 8:15 a. m., in the Munsey, Building

There were present: Colonel Blunt; Colonel Dunn; Colonel Hodgson; Major Pierce; Admiral Rousseau; Paymaster Hancock; Mr. Coffin; Mr. Scott; Mr. Summers; Mr. Bulkley; Mr. Bolton, Secretary; Mr. Scott presiding.

The reading of the minutes of the previous meeting was dispensed with.

Reports received.—A report from A. S. Mather dealing with the labor situation in the Lake Superior district and the car situation at the lower lakes was presented and ordered filed.

Communication from Ordnance Department, April 27.—A Communication from the Ordnance Department, together with a list of material being procured under contract by that Department, delivery of which should be expedited, was presented and ordered referred to the committees having the various materials in charge.

Communication from Ordnance Department, April 28.—A communication from the Ordnance Department under date of April 28th, relative to the purchase of 2,500 Colt machine guns was presented and referred to Colonel Blunt and Mr. Scott as to what prices were considered reasonable for this material.

Communication from Ordnance Department, April 28.—A communication from the Ordnance Department under date of April 28th, relative to the purchase of certain 3" and 4.7" guns and gun forgings from the Bethlehem Steel Company was presented, and
148 ordered referred to Colonel Dunn and Mr. Scott for attention.

Communication from the Ordnance Department, April 24.—A communication from the Ordnance Department, under date of April 24th, was presented advising as to the purchase of certain shrapnel ammunition, and ordered filed.

Reports.—A report from the Secretary as to the liability of the Meurer Metal Products Co. was presented, and the information ordered transmitted to the Department interested.

A report on the amount of money involved in the proposed purchases of the Bethlehem Steel Company and the Washington Steel

and Ordnance Co. was outlined in a communication under date of April 19th, which was presented and ordered filed.

A report from Mr. Bonner of the United States Steel Corporation setting forth propositions made by that corporation to the Navy Department and to the War Department on plates and structural shapes was presented, together with several memorandums calling attention to the general conditions prevailing with both the producers and the consumers of steel products due to the fact that a large tonnage has been reserved for the Government, or at least has been reported reserved.

After some discussion the Chairman asked authority to present this matter at the meeting to be held this morning of the several Secretaries of the Cabinet relative to the price problems in general, which authority was granted.

It was further suggested that these memorandums be held for presentation to such a body as might be appointed to decide on
149 precedence and priority.

Raw Material—Request for Lead.—Colonel Blunt presented a memorandum received from Mr. Olen of the Western Cartridge Co. relative to the shortage in lead which that company was experiencing, and the matter was referred to the Raw Materials Committee for attention.

Raw Material—Wool.—A communication was presented to the Board from the President of the Association of Woolen Manufacturers dealing particularly with the embargo at present on that commodity. The Chairman was requested to ask permission of the Secretary of War to have a representative of the Raw Materials Committee confer with the British authorities with a view to having this embargo feature remedied.

After some discussion, the Chairman appointed a committee consisting of Mr. Coffin, Mr. Summers, and Mr. Scott, with instructions to draw up a draft outlining the expansion and powers of this Board as viewed for the future.

The meeting adjourned at 10 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

150 Minutes of Meeting of the General Munitions Board held Thursday, May 3, 1917, at 8:15 a. m., in the Munsey Building

There were present: Colonel Blunt; Colonel Dunn; Colonel Hodgson; Major Pierce; Paymaster Hancock; Dr. Martin; Mr. Rosenwald; Mr. Summers; Mr. Vandervoort; Mr. Osborne; Mr. Scott; Mr. Bolton, Secretary; Mr. Scott, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Horse-Drawn Vehicles.—(a) Communication from the Quartermaster Department: The Chairman presented a communication from the Quartermaster General advising as to the requirements at the Quartermaster Corps for ambulances, escort wagons, etc., stating that the necessary steps had been taken to procure the entire equipment of vehicles of this character for one million men.

(b) Report from Mr. Butterworth's Committee: The Chairman presented a report written by Mr. Mixter, representing the committee appointed on horse-drawn vehicles, which report was ordered accepted and filed.

(c) Artillery Wheels: Communication from Mr. Mixter was presented relative to the manufacture of field artillery requirements, calling particular attention to artillery wheels. This matter was referred to Mr. Vauclain's Committee with a suggestion that Mr. Vandervoort be delegated to investigate the matter and report.

151 *Medical Corps Requirements.*—Dr. Martin spoke with reference to the ambulances needed for immediate service on the Continent and in connection with this a verbal report was presented from Colonel Fisher, representing the Committee recently appointed on this subject, to the effect that the authority of the Secretary had been secured for the necessary expenditure and the specifications for the type of ambulances required were to be supplied him shortly, upon receipt of which he would be prepared to come before the Board and ask for aid in placing orders and securing delivery.

Resolutions—Regarding National Research Council.—The Chairman presented a communication received from Dr. Hale, of the National Research Council, recommending that the Research Council be represented on the General Munitions Board. It was moved and carried that the following recommendation be transmitted to the Council of National Defense with a statement of approval of the General Munitions Board, i. e.:

> In view of the fact that the National Research Council, through its Military Committee, and its Committee on Physics, Chemistry, and Engineering, and its special Committees on Aeronautics, Nitrate Supply, Optical Glass, and Noxious Gases, is engaged in various investigations having a direct bearing upon the work of the General Munitions Board, I beg to recommend that the Research Council be represented upon the Board.

Reports received—Nitrates.—A report of Colonel Dunn, advising as to the conference held April 23d with certain representatives on the subject of supplying nitrates to the Army and Navy Departments, was presented to the Board.

It was moved and carried that a copy of the report be transmitted to the Ordnance Bureaus of the Army and Navy with a recommendation that one or more of the three agencies mentioned in
152 this report, or other agencies selected by the Departments, be utilized as suggested, and that the present practice of purchasing nitrates in the open market be discontinued.

It was further ordered that such action be withheld pending investigation by the Secretary as to the outcome of the recommendation made some time ago to the Council that the Government require two or three hundred thousand tons of nitrate as a reserve supply.

Reports on Raw Materials.—A report was presented from Mr. Bonner relative to the reported shortage of steel sheets among the members of the National Implement and Vehicle Association, showing that this matter had been satisfactorily adjusted.

The report was ordered received and filed with a further request that the Raw Materials Committee be advised on the subject.

Resolution Regarding Priority Committee.—The following resolution was offered, which was properly seconded and carried:

Resolved, That the General Munitions Board recommend to the Council of National Defense that this Board be authorized to create a Priority Committee as one of the subordinate organizations of the Council of National Defense and of the General Munitions Board, with authority to establish priority between the general demands for material within our own country; this to supplement the authority the General Munitions Board now has to establish priority between Departments of the Army and Navy.

Precedence of orders.—Several recommendations from the Bethlehem Steel Company were presented asking that certain orders for machinery necessary to that company's plant, to furnish Government work promptly, be expedited. This matter was referred to the Secretary for attention.

153–154 *Prices—Communication from the Ordnance Department.*—The Chairman presented a draft of a letter with reference to the following communication received from the Ordnance Department:

Under date of April 13th—File 334.8/60;
Under date of April 13th—File 334.8/61;
Under date of April 14th—File 334.8/63;
and a communication under date of April 19th requesting advices as to prices which are just and reasonable on guns and artillery equipment, all of which had been referred to Colonel Dunn for attention.

The Chairman suggested that these letters, together with all correspondence relative thereto, be returned to the Chief of Ordnance with a recommendation that contracts be let on the cost-plus basis, and further giving the Chief of Ordnance the benefit of such forms of contracts as had been prepared by this Board.

Upon motion duly seconded such action was carried.

Resolution—Compensation Committee.—The following resolution was adopted:

Resolved, That the General Munitions Board recommend to the Council of National Defense that authority be given this Board to create a Compensation Committee with authority to establish forms and methods of compensation in connection with cost plus percentage contracts; such board also to adjust the differences which will arise from time to time on such contracts.

Reports—Committee on Uniform Construction Contracts.—Mr. Bulkley presented a report and special form of contract drafted by the Committee on Construction of Buildings and Engineering works, which report was ordered received and the appreciation of the Board expressed to the Committee for its work.

155 The report was ordered referred to Colonel Hodgson and Mr. Bulkley to be discussed with representatives of the Quartermaster Department, Engineer Corps, and Signal Corps.

Requirements—Raw Materials necessary for army ammunition.—Colonel Blunt presented a memorandum showing the amount of copper, zinc, and lead required in the proposed contracts for rifle and pistol ball cartridges, which was ordered received with further request that the Raw Materials Committee be advised as to this data.

Mr. Rosenwald took the chair at this time.

Requirements—Navy.—Paymaster Hancock presented a list of the requirements of the Marine Corps, composed principally of supplies on which clearance was asked. This matter was referred to Mr. Rosenwald's committee.

Precedence of Orders.—Paymaster Hancock presented a memorandum from the Bureau of Steam Engineering requesting that certain orders for the Trego Motor Corporation be expedited, which matter was referred to the Secretary for attention.

The meeting adjourned at 10 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

156 Minutes of Meeting of the General Munitions Board held Friday, May 4, 1917, at 8: 15 a. m., in the Munsey Building

There were present: Colonel Blunt; Colonel Dunn; Colonel Hodgson; Major Pierce; Paymaster Hancock; Mr. Rosenwald; Mr. Summers; Mr. Scott; Mr. Bolton, Secretary; Mr. Scott presiding.

The reading of the minutes of the previous meeting was dispensed with.

Orders Placed.—Communication from the War Department reporting the placing of an order with the John Wood Manufacturing Company for cartridge-storage cases for seacoast ammunition, explaining the reason for this action, was presented and ordered filed.

Precedence of Orders.—Communication from the Watertown Arsenal asking that certain of their orders for high-silicon and low-silicon iron placed with the Bethlehem Steel Company, be expedited, was presented to the Board and referred to the Secretary for attention.

Communication from the State Department asking the opinion of this Board on a request for shipment of charcoal boiler tubes to Mexico was presented and referred to Paymaster Hancock for report tomorrow.

Reports.—Committee appointed to negotiate with the Midvale and *Bethlehem Steel Companies.* Colonel Dunn verbally reported for the committee appointed to negotiate with the Bethlehem and Midvale Steel Companies with a view to increasing the facilities for forging and machining at these plants, stating in substance that the Bethlehem Steel Company had agreed to take half of each calibre of the requirements of the Army and Navy up to five million

157 pounds of forgings on the basis of the last price the Government had contracted for similar amounts, and the Midvale Company had agreed to take forgings at an established price but that difficulty had been experienced in arriving at what was a fair and just price for the various-size forgings. In both cases 15¢ per pound was to be added to the prices of the various forgings to cover the cost of plant expansion.

Mr. Vauclain reported the further conference he had had with the Midvale and Bethlehem people and offered a report showing reduction arranged for on certain size forgings, compensation presented being fixed prices.

The question whether a fixed price or a cost-plus basis was preferable was discussed fully, and Mr. Scott drew up a memorandum proposing methods for immediate action.

After some discussion the memorandum was ordered approved with certain changes, which memorandum is to be presented at an adjourned meeting of the Board to be held at 2: 30 this afternoon.

The meeting adjourned at 11 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

158 **Minutes of Special Meeting of a Committee on Munitions held Friday, May 4, 1917, at 2: 30 p. m., Munsey Building**

There were present: Mr. Scott; Mr. Vauclain; Mr. Rosenwald; Mr. Crowell; Colonel Dunn; Colonel Blunt; Major Jamison; Paymaster Hancock; Mr. Bolton, Secretary; and Mr. Scott presiding.

The discussion as to fair and just prices to be paid the Bethlehem Steel Company and the Midvale Steel Company for gun forgings was continued, and it was pointed out that both companies preferred a fixed price for the various types of forgings rather than a cost-plus basis, and that neither company agreed on the suggestion of a cost-plus basis with the understanding that the percentage of compensation was not to be over 15%.

Major Jamison pointed out his reasons for believing that the Bethlehem prices were about fair while the Midvale prices seemed high in most cases, and after some discussion Mr. Vauclain suggested, in view of Major Jamison's statement, that the Bethlehem Steel Co. be awarded a contract of 50% of the requirements of the Army and Navy and on the basis of the prices mentioned in their bids, and that the Midvale Steel Corporation be offered the same opportunity to accept like amount; or in case they did not accept this proposition, that they should be advised to proceed with the work on a cost-plus percentage basis. Major Jamison was requested to draw up a brief combining his figures as presented to the Board, also a memorandum of the suggestions offered this morning and supplemented by Mr. Vauclain's suggestions, with the understanding that the requirements of the Army and Navy were to be divided equally among the Midvale and the Bethlehem companies and that 15¢ per pound was to be paid up to 50% of the cost of construction of additional plant facilities necessary to increase the output of both the Bethlehem and Midvale Companies, to increase their capacities up to ten million pounds of forgings. It was further suggested that the Secretary of War and the Secretary of Navy appoint officers to proceed at once to each plant.

The meeting adjourned at 3 p. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

159 **Minutes of Meeting of the General Munitions Board held Saturday, May 5, 1917, at 8: 30 a. m., in the Munsey Building**

There were present: Rear Admiral Capps; Rear Admiral Rousseau; Rear Admiral Zane; Commander Kearney; Commander Leigh; Paymaster Hancock; Dr. Holcomb; Mr. Howe; General Cruse; Colonel Dunn; Colonel Hodgson; Colonel Blunt; Major Pierce; Major Wallace; Dr. Fisher; Lt. Col. Lemly; Mr. Rosenwald; Mr. Coffin; Mr. Scott; Captain Barber; Mr. Bolton, Secretary; Mr. Scott, Presiding.

The reading of the minutes of the previous meeting was dispensed with.

Resolution—Army Equipment.—The general subject of equipment and policy in handling troops was discussed and the following motion was put before the Board and properly carried:

Resolved, That it has now become particularly necessary for the General Munitions Board to know definitely whether types of artillery and small arms to be used by our troops are to be the same as those used by the British Government, or other types, in order that plans may be formulated for equipping our forces, and that such information be transmitted to the Council of National Defense with request that this question be given their earnest consideration.

Negotiations with the Bethlehem and Midvale Steel Companies.—The Chairman tendered a report which had been drawn for submission to the Secretaries of War and the Navy, recommending certain action with both the Bethlehem and Midvale Steel Companies in respect to increasing the forging capacities at these plants. The Chairman further stated that recommendations for trebling
160 the machining capacity at both plants would be made in the near future.

Reports submitted—Adjustment of Machinery between U. S. and British Governments.—The Chairman presented a memorandum embodying the results of the negotiations covering the adjustment between the British and the United States Government of machinery owned by the former in this country, at the rifle plants at New Haven, Eddystone, and Ilion.

Construction Contracts in connection with cantonments and aviation fields.—This matter was discussed at some length, during which it was shown that the suggested form of contract on the building of cantonments would not be applicable as now considered for the Langley field of the aviation corps.

Major Wallace reported on the Langley field and it was shown that his Department was cooperating in this work. It was urged that the Committee on Construction Contracts hasten their report on the type of contract as much as possible, giving due consideration to the different kinds of construction called for.

Resolution—Appointment of Committee suggesting proper percentage of compensation.—Upon motion offered by Colonel Dunn, and seconded by Colonel Blunt, the following resolution was carried:

Resolved, That the Chairman appoint a committee or committees of men representing various geographic sections of the country and properly qualified, who would make their recommendations on proper percentages of compensation for various classes of work to this Board, and that such committee or committees submit a table covering the usual percentages in various kinds of industries and further, the various pecentages recommended to be used by the Government.

161 *Purchases.*—Colonel Fisher requested information on the method of purchasing medical supplies, and after some discussion it was pointed out that any supplies not affecting raw materials and not called for on the list submitted to the various Departments by the Board under date of May 1st could be purchased without submission to the Board.

Seasoned Lumber.—Capt. Barber spoke for the Engineering Corps, calling attention to the fact that that Corps would need some pontoon wagons, which requirement was not considered by Mr. Butterworth's Committee. He was asked to confer with Mr. Butterworth's Committee on matter with power to act.

Optical Glass.—Major Wallace spoke on the subject of optical glass, calling attention to the fact that the Signal Corps is in need of additional quantities of this material. The matter was referred to Major Wallace to be discussed by him with Dr. Hale, Dr. Woodward, and Dr. Stratton, who had the subject under consideration.

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Resolution—Prices.—The matter of prices was discussed in general and various forms of contracts were again dealt with. Upon motion made by Admiral Capps and properly seconded, the following resolution was carried:

Resolved, That where prices of material, machinery, manufactured articles, etc., named by manufacturers are in excess of those recently paid for similar material, and prompt action is necessary to prevent delay in actual work of manufacture, the orders for such material may be placed immediately with such manufacturers and the actual price to be paid settled after further
162 investigation provided that the manufacturer is assured of a price of actual cost plus 10% after submitting complete and satisfactory data as to items controlling increase in cost and an affidavit as to accuracy of data submitted.

Storage and Depots.—Captain Barber brought up the question of proper storage facilities and was advised that this matter was under consideration by a special committee appointed by this Board and was asked to confer with that committee relative to his ideas on the subject.

Raw Material—Copper.—Mr. Howe called the attention of the Board to the fact that the Secretary of the Navy had received a letter with reference to the reported price arrangement made by the Government on copper. After some discussion it was moved and properly seconded that the matter in question be referred to Mr. Baruch for proper attention.

Priority—Forgings.—Colonel Dunn spoke of the necessity of determining the matter of priority on gun forgings required by both the Army and the Navy, due to the fact that the navy requirements would amount to the entire output of both the Bethlehem and Midvale Steel Companies as now anticipated.

It was pointed out that this was a matter of national policy and this special subject was referred to Mr. Scott to confer with Secretaries Baker and Daniels as a committee to definitely decide the matter.

The meeting adjourned at 11 o'clock.

CHESTER C. BOLTON, *Secretary.*

163 **Minutes of the Meeting of the Executive Committee of the General Munitions Board held Monday, May 7, 1917, at 8: 15 a. m., in the Munsey Building**

There were present: Paymaster Hancock; Colonel Hodgson; Major Pierce; Mr. Summers; Mr. Bolton, Secretary; Paymaster Hancock, presiding.

Communication from the Council of National Defense regarding resolutions.—Three communications were presented from Mr. Gifford in response to the resolutions submitted to the Council under date of May 3rd, by this Board:

(1st) Approving the resolution that the General Munitions Board recommend that the Research Council be represented on the Board and asking authority to appoint such a representative.

(2nd) Approving the recommendation of the General Munitions Board that authority be given that Board to create a Compensation Committee to devise methods by which costs may be ascertained.

(3rd) Commenting on the "recommendation of the Board that this Board be authorized to create a Priority committee", stating that the President is now considering plans of the same general nature pending the further development of which the Council will defer action, and that if the General Munitions Board will more definitely amplify its recommendation it will aid the Council in its later consideration of the subject.

164 It was further stated that pending the development of the plan now under consideration by the President, a committee was ordered appointed consisting of representatives of the Departments of Agriculture, Interior, and Commerce and of the General Munitions Board to consult with the Transportation Committee of the Advisory Commission in the determination of priority of shipments.

Paymaster Hancock was requested to act as the representative of the General Munitions Board on such a committee.

Cost of Forgings—Navy Department.—A memorandum was presented from Mr. Vauclain of the Committee on Forgings, in response to the inquiry of the Board under date of April 23d, as to whether the cost of hooks required by the Navy Yard and Naval Stations for the Wellman Seaver & Morgan Co. could not be reduced. The report was ordered filed with the further request that the Navy Department be advised as to the result of the investigation.

Industrial Reserve.—A communication was received from the Department of Labor in response to an inquiry from the Board under date of April 23d, regarding the employment by the Civil Service Commission of mechanics now employed upon Government contracts. This matter was ordered referred to Mr. Howe in connection with the work which he is doing regarding Industrial Reserve.

165 *Priority—Steel.*—Colonel Hodgson presented a request from the Quartermaster Department at Jeffersonville with reference to the steel situation, and requested information relative to securing priority on certain orders required at that point.

This matter was referred to Colonel Hodgson to discuss with Mr. Bonner, of the United States Steel Corporation.

Raw Material—Tubes.—Paymaster Hancock presented a report with reference to 5,000 tubes, concerning which the State Department had addressed a memorandum to the Board under date of April 28th, asking whether permission to ship these tubes to Mexico would be satisfactory.

Paymaster Hancock advised that such action would not interfere with Navy requirements and the Secretary was instructed to so advise the State Department.

Requirements—Army.—After some discussion, the Secretary was requested to procure a statement from the Bethlehem Steel Company at the earliest possible moment, with an idea to learning definitely just what orders have been placed by the Ordnance Department with the Bethlehem Steel Company, and the status of such orders relative to delivery.

Communication from the Navy Department—Cooperation of Wilmington Committee on National Defense.—Paymaster Hancock presented a letter received from the Wilmington Committee on National

Defense offering to cooperate with the Munitions Board. This communication was ordered referred to the Council of National Defense in connection with their work with State organizations.

166 *Communication from Navy Department—Bureau of Steam Engineering.*—Paymaster Hancock requested information from the Munitions Board asking for a list of all plants that have facilities for producing electrical equipment. This matter was referred to the Secretary for attention.

The meeting adjourned at 9 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

167 Minutes of Meeting of Executive Committee of the General Munitions Board held Tuesday, May 8, 1917, at 8:15 a. m., in the Munsey Building

There were present: Colonel Hodgson, Colonel Dunn, Major Pierce, Paymaster Hancock, Mr. Summers, Mr. Bolton, Secretary; Paymaster Hancock presiding.

Communication—Forgings.—A communication from the Ordnance Department was presented relative to increasing the capacity of the Bethlehem Steel Company and the Midvale Company, reporting that the Bethlehem Steel Co. had been advised to provide additional facilities for forgings, but that the increase in machining facilities had not been authorized, pending the outcome of certain suggestions being considered by the Board.

The communication was ordered accepted, with the understanding that this matter was to be considered further at a full meeting of the Board.

Raw Materials—Cotton Goods.—A memorandum was presented from the Ordnance Department approving the suggestion of certain purchases for the Ordnance Department, as presented to the Munitions Board by Mr. Lincoln Grant, Chairman of the Committee on Cotton Goods Industry, under date of April 27th.

This communication was ordered received and to be reported to Mr. Rosenwald's Committee.

168 *Memorandum—Committee on Emergency Construction of Buildings.*—A memorandum from the Committee on Emergency Construction of Buildings was presented and attention called to the fact that that Committee requested authority to take up the question of establishing a list of competent contractors through proper channels, who might be able to give trustworthy and confidential information.

Such action was authorized with the suggestion that this work be expedited just as much as possible.

Raw Materials—Asbestos.—A communication from the Navy Department was presented, calling attention to the source of supply of long fibre asbestos. This matter was ordered referred to the Raw Materials Committee.

Munitions Manufacturers.—A communication was presented from the Navy Department calling attention to the American Arms Corporation of New York, which corporation included a great many plants that might be useful to the Government in the manufacture of various munitions, or parts thereof.

This memorandum was ordered received and added to the list of manufacturers which the Munitions Board has on file.

Prices.—A memorandum was presented from Mr. Coffin relative to stating in each particular contract that the Army or Navy let, whether such contractors are subject to the eight-hour-day provision.

This matter was ordered held until a general meeting of the Munitions Board.

The meeting adjourned at 9 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

169 Minutes of Meeting of the Executive Committee of the General Munitions Board held Wednesday, May 9, 1917, at 8:15 a. m., in the Munsey Building

There were present: Colonel Hodgson, Colonel Dunn, Major Pierce, Mr. Summers, Paymaster Hancock, Mr. Bolton, Secretary; Major Pierce presiding.

The reading of the minutes of the previous meeting was dispensed with.

Prices—Cooperation with the French Government in purchases.—The Secretary presented a memorandum covering an interview relative to Capt. Dhavernas, of the French Purchasing Commission, in which authority to exercise an option on 5,000 tons of ship plates was requested, and the question of cooperating purchases of the French and the United States Governments was referred to.

This matter was turned over to Major Pierce to discuss with the Secretary of War in order that a definite decision on the matter might be reached at Thursday's meeting.

Army Requirements—Artillery.—The Secretary presented a communication from the Bethlehem Steel Company, also one from the Ordnance Department, showing the amount of guns, gun carriages, caissons, and limbers ordered at present from the Bethlehem Steel Company, and the amount of field artillery ordered and still to be ordered.

Both of these communications were in response to a request
170 from Major Pierce and were referred to him for his attention.

After some informal discussion on the matter of equipment the meeting adjourned at 9 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

171 Minutes of Meeting of the General Munitions Board held Thursday, May 10, 1917, at 9 o'clock a. m., in the Munsey Building

There were present: Colonel Hodgson; Colonel Blunt; Major Kelley; Colonel Fisher; Dr. Simpson; Dr. Hodgson; Colonel Dunn; Major Pierce; Col. Lemley; Admiral Zane; Major Wallace; Admiral Capps; Mr. Howe; Commander Leigh; Commander Kearney; Admiral Rousseau; Dr. Milliken; Mr. Summers; Mr. Weber; Paymaster Hancock; Mr. Bolton, Secretary; Mr. Scott, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Allies requirements.—A communication was presented from Mr. Vauclain, regarding the manufacture of Belgium rifles, calling attention to the delay being encountered in the delivery of the same.

This matter was referred to Colonel Blunt for attention and report to the Board.

Communication—Committee on Emergency Construction Contracts.—A communication was presented from Mr. Starrett, of the Emergency Construction Contracts Committee, making recommendations which that committee believed necessary to their work.

A letter was also presented in connection with this matter from the Lumber Committee, pointing out the need of cooperation in the matter of lumber needed for cantonments and ships, suggesting that the Lumber Committee act as a clearing house for all government needs of lumber.

172 *Motion.*—After some discussion it was moved and properly seconded that the report be adopted and that the various departments of the Army and the Navy make known their requirements to the Lumber Committee with a view to having the Committee, together with the Legal Department of the General Munitions Board, cooperate in taking care of the needs of the various departments.

Such motion was carried.

Raw Material—Expediting Delivery.—A communication from the Committee on Supplies was presented, calling attention to the necessity of having the delivery of coal to the Amoskeag Manufacturing Company at Manchester, N. H., expedited, which matter was ordered referred to Mr. Peabody of the Coal Committee for proper attention and report to the Board.

Car Shortage.—The situation in respect to cars and the lack of transportation facilities was discussed, and it was suggested that Mr. Fairfax Harrison and Mr. George Hodges of the Transportation Committee be notified to attend the Executive Committee Meeting of the General Munitions Board on Friday, May 11, at 9 a. m. o'clock, with a view to discussing this matter to ascertain whether steps cannot be taken whereby the situation might be relieved.

Such action was approved.

Prices—Raw Materials.—The raw-material situation and prices pertaining to the different materials was discussed at some length, and a report on this general subject was requested to be presented to the Board at its meeting on May 11th by Mr. Baruch, Mr. Summers, and Mr. Scott.

173 *Prices.*—Colonel Fisher spoke of the arrangements made for procuring certain supplies for the Medical Department from Mr. Kendall, and requested permission of the Board to procure this material on a cost-plus basis.

Colonel Fisher was advised that the Board would agree to cooperate in fixing the prices on these supplies.

Raw Material—Forgings.—The negotiations with the Bethlehem Steel Company and the Midvale Steel Company were discussed in which it was pointed out that no definite action had been taken by the Secretaries of the War and the Navy, to whom a report had been addressed on May 4th, relative to proposals for gun forgings.

Colonel Dunn reported that it was his understanding that the proposition as offered in the report of May 4th was not agreeable to the Bethlehem Company, and after some discussion it was moved that if the Bethlehem Steel would not agree to a charge of 15¢ per pound for additions to building and equipment being made on not exceeding 50% of the cost of such additions, that the General Munitions Board was in favor of recommending the payment of the entire cost of the additions to buildings and equipment, with the understanding that these added facilities should be the property of the United States Government upon the completion of the proposed forging contracts.

Such motion was carried.

The Board further concurred in the opinion that the Bethlehem Steel Company and the Midvale Steel Company should each

174 have allotted to them approximately 5,000,000 pounds of forgings as originally contemplated, but that additional forging facilities elsewhere should be developed as promptly as possible.

Sundry Matters—Functions of the Board.—Major Pierce, Paymaster Hancock, and Mr. Scott were appointed a committee to call upon the Secretary of War and the Secretary of the Navy for the purpose of discussing the functions of the General Munitions Board to determine questions pertaining to subjects which had been developed during the discussion on the gun forging report.

Committee on Emergency Construction Contracts.—In connection with the work being done by the above-mentioned committee, it was suggested that all general questions pertaining to the construction of buildings be referred to Mr. Lundoff's Committee, and motion properly seconded, was carried to the effect that the functions of the Emergency Construction Committee should be increased to cover general questions pertaining not only to forms of contracts, but to engineering and constructional work as well, and that this committee should be enlarged by the addition of two or three men of engineering experience.

Priority.—Paymaster Hancock asked the sanction of the Board of 175,000 pounds of forgings which the Navy wished to procure from the Carbon Steel Company for the Battleship *Tennessee.* Such sanction was granted.

Sundry matters—Industrial Reserve.—Mr. Howe reported verbally that instructions had been issued to the various secretaries of the Civil Service Commission to exercise care in the employment of men from plants doing work directly or indirectly for the Government.

175 *Priority.*—Mr. Howe reported verbally on a request from the Great Lakes Engineering Company, asking that certain material from the Carnegie Steel Corporation be expedited for the manufacture of ships ordered by the British Government, stating that a cable from the British Government had shown the necessity for urgent action.

Mr. Howe advised that steel manufacturers have been notified that insofar as the steel necessary does not conflict with ships under construction, with material for munitions or for the construction of plants for munitions purposes, delivery of such steel is to be expedited.

Priority.—The Chairman reported on some locomotive cranes on which work was being withheld because of lack of details from the French Government, for whom the cranes were intended, calling

attention to the fact that because of nondelivery of these cranes work was being delayed on others for the Navy Yards and Ship Yards, and asked that authority be given, in the absence of information on the cranes in question, for such cranes to be delivered to the Navy and preference given to the navy orders until the French matter could be satisfactorily decided.

Upon motion, such authority was granted.

Resolution—Appropriations.—The following motion was presented, i. e.:

Resolved, That the General Munitions Board feels it is its duty to call attention to the fact that the letting of contracts for material necessary for housing, equipping, and arming troops to be ordered to the field, as well as those
176 already in service, are being seriously delayed by the failure of Congress to pass the Appropriation Act; that in the opinion of the General Munitions Board this delay has already made it impossible to carry out some provisions originally contemplated.

Such motion was promptly carried and ordered to be presented to the Chairman of the Committee on Appropriations of the Senate and the Chairman of the House Committee on Appropriations.

Raw Material—Lead.—Mr. Summers called attention to the fact that the requirements of the Army and Navy for the coming year in lead would amount to approximately 20% of the total production in the United States, and that authority had been asked by Mr. Baruch that a certain amount of lead be withheld from the market at certain fixed market prices.

It was suggested that Mr. Summers prepare a letter for presentation to the Secretary of the Navy and to the Secretary of War, which communication would properly outline the subject and show the necessity for such authority being granted.

This action was ordered.

The meeting adjourned at 11:30 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

177 **Minutes of Meeting of the General Munitions Board held Friday, May 11, 1917, at 8:15 a. m., in the Munsey Building**

There were present: Admiral Rosseau; Paymaster Hancock; Colonel Hodgson; Colonel Blunt; Major Pierce; Mr. Weber; Mr. Scott; Dr. Stratton; Dr. Day; Dr. Millikan; Mr. Bascom Little; Mr. George Hodges; Mr. Fairfax Harrison; Mr. Bolton, Secretary; Mr. Scott presiding.

The reading of the minutes of the previous meeting was dispensed with.

Supply of Optical Glass.—Dr. Day and Dr. Stratton reported verbally on the situation prevailing today throughout the country on optical glass, calling attention to the fact that there are but three sources of supply at present, and pointing out the difficulty experienced in procuring sufficient glass for Army and Navy requirements unless additional facilities be developed.

These gentlemen, with Dr. Milliken, recommended:

(*a*) That definite information be obtained as to the requirements of the army.

(*b*) That the help of companies now making ordinary glass be secured to produce one or two kinds of optical glass.

(*c*) That the Bureau of Standards work with new manufacturing plants, with a view to developing optical-glass production.

It was further suggested that officers of the Army and Navy meet with Dr. Milliken's Committee in an endeavor to standardize
178 optical glass and eliminate certain types now specified and not necessary. Officers from the Ordnance Department, Signal Corps, Bureau of Ordnance, and Bureau of Navigation were suggested.

Prices.—Colonel Blunt reported on a conference which he had with the Marlin Arms People regarding 2,500 Marlin guns required by the Government, stating that a price of $650 had been named at first. He advised, however, that he had made arrangements with this company for a reduction in price to $600.

Car Shortage.—Mr. Harrison and Mr. Hodges, of the Railway Association Committee, spoke, outlining the duties of their committee, the principal purpose of which is the function of expediting the movement of freight. Mr. Harrison called attention to the fact that the establishment of priority was the chief difficulty of that committee, but that the committee had decided that coal should be given first preference and iron ore second.

Mr. Harrison further stated that a specific statement as to what the Government or the Munitions Board wished done would greatly aid this committee, and that if the principles on which that committee is to work be definitely stated, a larger degree of cooperation would be reached.

The Chairman suggested a small committee be appointed to work with the Railway Association Committee in attending to requests for aid in this matter, if such requests are proper, and in view of this it was suggested that Paymaster Hancock, Major Pierce, and Colonel Hodgson be appointed a committee to work with the Railway Association Committee, who, in turn, were to designate one of their members to act with the General Munitions Board and its com-
179 mittee mentioned above. Such action was sanctioned.

Machine Guns.—Mr. Little reported for the Machine Gun Board, advising that that Board had recommended to the Secretary of War that a contract be let immediately, to the manufacturer, for 10,000 Browning Guns, which had been tested and found very satisfactory. The Colt Browning Gun made by the Colt people would be manufactured at the same plant as the Vickers Gun, and it was therefore necessary to expedite as much as possible the delivery of orders which the Colt people had for the Vickers Guns, in order to be ready for the manufacture of the Browning Guns when required. Such action would be satisfactory to the Colt people.

In view of the above, it was suggested that the General Munitions Board appoint a committee on the problem of production of machine guns (which action it was stated the Secretary of War approved) which committee was not to conflict with the Machine Gun Board appointed by the Secretary of War.

It was moved and seconded that authority be given the Chairman to appoint a committee of three on machine guns, as suggested above,

whose functions were to be related to the machine-gun production and manufacture.

Such motion was properly carried, and the Chairman appointed Mr. Hanson, Mr. Bascom Little, and a third member to be designated by these two gentlemen with a further understanding that Colonel Blunt was to be the representative of the Munitions Board to confer with this committee on subjects pertaining to machine guns.

180 It was further suggested that the machine-gun subject be withdrawn from the present committee on small arms, which action was approved.

The meeting adjourned at 10:30 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

181 Minutes of Meeting of the General Munitions Board held Saturday, May 12, 1917, at 8:30 a. m., in the Munsey Building

There were present: Admiral Capps, Mr. Weber, Colonel Hodgson, Paymaster Hancock, Admiral Rosseau, Dr. Martin, Colonel Fisher, Dr. Holcomb, Colonel Dunn, Admiral Zane, Colonel Blunt, Major Pierce, Commander Leigh, Gen. Aleshire, Major Wallane, Mr. Howe, Mr. Scott, Mr. H. P. Bingham, Assistant Secretary, and Mr. Scott presiding.

The reading of the minutes of the previous meeting was dispensed with.

Reports—Committee on Emergency Construction of Buildings and Engineering Works.—A report from this Committee was presented, giving certain data as to the quantity of material needed in the construction of the proposed cantonments and stating that it appeared impossible to complete these cantonments within the time set. Certain recommendations were offered to facilitate the work. Likewise, this committee suggested certain changes in construction of cantonments, which would tend towards speeding up the completion and would create a saving to the Government.

This matter was referred to Major Pierce and Colonel Hodgson for the purpose of securing prompt action on this subject.

Optical Glass—Communication from the Carnegie Institution.—A letter from Mr. Robert S. Woodward of the Carnegie Institution of Washington was read, offering the services of the Institution to the Government, and giving some useful information on the

182 subject of optical glass. This letter was ordered received.

Gun Forgings—Report from Mr. Vauclain's Committee.—A report was presented in connection with the letting of contract to the Bethlehem Steel Company, covering naval artillery. It was recommended that it might be advisable to send the committee of accountants, now in existence, to the Bethlehem Steel Company, and likewise to the Midvale Company to determine the possibility of segregating the cost of guns from their general cost.

This report was ordered adopted.

A letter from the Secretary of the Navy addressed to the Bethlehem Steel Company, dated May 5th, 1917, was read in connection with this subject and ordered received.

This data was turned over to Mr. Vauclain for his attention.

Reports—Committee on Storage and Storage Arrangements.—A report covering the work accomplished by this Committee was read and accepted.

Priority Committee—Communication from Director as to Functions.—A letter from the Council of National Defense covering the instructions regarding the functions of this committee was presented, and copies ordered sent to each member of the Board.

Committee Membership—Priority Committee.—The Chairman announced that General Aleshire had been appointed Chairman of this committee, the other members to be announced later.

Army Requirements.—Motor Trucks.—A communication from the Quartermaster General was presented calling for bids on trucks, the number to bid on being from one to 35,000. The reason for this method of asking for bids was discussed and Colonel Baker

183 informed the Board that the prices would be as satisfactory as though a definite number were inquired for. The Chairman expressed the very earnest opinion that this method of dealing with this problem would in his opinion involve both the Government and the manufacturers in needless delay and expense.

Construction—Langley Field.—A method for placing contracts to cover the building of Langley Field was discussed and no definite action taken.

Precedence of Orders—Recording & Computing Machine Co.—A communication was presented from Mr. Vauclain relative to an order which the Eddystone Ammunition Company had placed with the above company covering Russian fuses, and asking that they be required to complete their order with the Eddystone plant before they take on U. S. Government business. This matter was referred to Colonel Dunn for attention.

Reports from General Munitions Board.—A resolution from the Council of National Defense asking that weekly reports be submitted, covering the work accomplished and that planned for immediate future by the General Munitions Board and its subcommittees, was presented and ordered acted upon.

Prices—Monel Metal.—A communication was presented covering prices of Monel metal and ordered referred to Mr. Weber for attention.

Prices—Cotton Webbing.—A communication from the Chief of Ordnance was presented covering cotton webbing and requesting approval of prices. This matter was referred to Mr. Eisenman asking for a report by Tuesday, May 15, 1917.

184 *Priority—Shortage of tin.*—A communication from the Raw Materials Committee covering this subject was referred to the Priority Committee for attention.

Priority—Shortage of Cans.—A communication from the Depot Quartermaster at Fort Mason, San Francisco, was presented covering the subject of shortage in cans for vegetables. This matter was referred to the Priority Committee.

Prices—Ammonium Picrate.—A communication from the Chief of Ordnance was presented asking for approval of prices on the above subject. The matter was referred to Mr. Weber.

Communication—Industrial Development—from Mr. Coffin.—A communication from Mr. Coffin was presented and accepted, having to do with industrial development of the country. Copy of this letter was ordered sent to each member of the General Munitions Board.

Priority—Embargo on Flax.—A report from the J. E. Barber Company, in connection with the embargo on flax, was presented and ordered referred to the Priority Committee for their attention.

Raw Materials—Situation in connection with wages in copper industry.—A communication from Mr. Coffin on this subject was presented and ordered referred to Mr. Weber.

Report—Preference of Freight.—A report from Mr. Hodges on this subject was presented and ordered referred to Paymaster Hancock.

Resolution.—It was moved and carried that Major Pierce and Mr. Scott get in touch with Mr. Shirley of the Appropriation Committee of the House of Representatives to arrange means whereby that committee can become more familiar with the work of the
185 General Munitions Board.

Contracts.—The proposed contract to be used for cantonment construction was presented by the Committee on Emergency Construction and approved.

Resolution—Enlistment of Industrial Workers.—The following resolution was adopted:

Whereas recruiting for the Army and Navy is now being vigorously pursued in the immediate vicinity of plants engaged in the manufacture of munitions for the United States Government with the effect that the organization of such plants is being seriously impaired, it is

Resolved, That the General Munitions Board again bring to the attention of the Council of National Defense the importance of immediate steps being taken to improve these conditions.

The meeting adjourned at 11:15 a. m. o'clock.

H. P. BINGHAM, *Assistant Secretary.*

186 **Minutes of Meeting of the General Munition Board held Monday, May 14, 1917, at 8:15 a .m., in the Munsey Building**

There were present: Major Pierce; Colonel Blunt; Paymaster Hancock; Dr. Milliken; Gen. Aleshire; Dr. Simpson; Mr. Summers; Mr. Scott; Mr. Scott, presiding; and Mr. H. P. Bingham, Assistant Secretary.

The reading of the Minutes of the previous meeting was dispensed with.

Report—Vital needs of Russia.—Mr. Scott stated that in a conference with Senator Elihu Root he had been asked what in his estimation were Russia's most vital needs in which we could assist, and stated that he had given them the following list, placed in order of importance: rail transportation, motor transport, machine tools, military instruments, and heavy artillery.

This subject was then informally discussed and the sense of the Board was that the order given was in accordance with its understanding.

Artillery—Size to be used.—It was reported that no definite decision had as yet been reached as to the size of United States army artillery, and the delay in manufacture due to this lack of decision was commented on.

187 *Ammunition—Rifle Cartridges.*—Colonel Blunt spoke of the superiority of our rifle ammunition and recommended that this be used even in English guns if it was necessary to use them.

Priority Committee.—The Chairman instructed that the matters coming under the supervision of the Priority Board should be turned over to them without going through the Board, their actions to be cleared through weekly reports to be submitted to the Board.

Recruiting.—A copy of the letter from Major Pierce, of the General Staff, directed to the Council of National Defense, relating to the present harm being done munition manufacturers by recruiting near their plants was read and ordered filed.

Inventions.—A letter was read pertaining to securing a member of this Board to serve on an inventions committee which is to be sent to France. This was referred to Dr. Milliken to consider and report on Tuesday, May 15th, if possible.

Auto trucks—Report from the S. A. E.—Relative to inquiries being sent out by the Quartermaster General (No. 451.1/T.) concerning touring cars, trucks, and motorcycles, a report was presented dealing with this subject from the S. A. E. and ordered accepted.

Report—Prices of TNT.—A report from Colonel Blunt was received relative to prices given the Chief of Ordnance for TNT.

The report was received concurring in these prices.

188 *Report—Supply of Powder.*—A report from Colonel Blunt was accepted which stated that the supply of powder for the United States Cartridge Company from the DuPont Powder Company had been arranged for.

Report—Delivery point for copper, zinc, and lead for cartridges.—Colonel Blunt reported that no delivery point could be designated until a central purchasing agency was established and that he thought this could be brought about.

Report—Offer of additional facilities—Rifle Parts.—Colonel Blunt reported that he did not think the offer of John A. Cozzone & Company need be taken advantage of.

Priority—Haversack Duck.—A communication was drawn up by Colonel Hodgson to be presented to certain duck manufacturers who had been affected by the Board's action relative to the rushing of haversack duck at the expense of existing contracts which he covered from status in regard to contracts delayed by this action.

Priority—Milk.—A communication from the Quartermaster General was presented covering the necessity for encouraging canning facilities for milk and ordered placed on file.

Priority—Shortage of Coal.—A communication from the Hartford Electric Light Company, Hartford, Conn., complaining of the delay they were experiencing in the receipt of coal was presented and referred to General Aleshire for attention.

189 *Contracts—Status.*—Colonel Blunt reported on the contracts for rifles already let and gave figures as to when these contracts would be completed and the maximum monthly production rate.

Colonel Blunt was asked by the Chairman to get up a statement to be given to the press covering this situation.

Contracts—Artillery.—The Chairman asked Major Pierce and Colonel Dunn to draw up statements as to the present situation which might be given to the press.

Priority Committee—Duties of.—The duties of the Priority Committee were under discussion and General Aleshire was requested to go into the organization of this committee at his convenience.

Prices.—Colonel Hodgson brought up the matter as to the difficulty the Quartermaster Department was having with prices for cast-iron pipe. Mr. Scott then read a communication to the Council on National Defense concerning the matter of runaway prices. This communication was approved by the Board for transmission to the Council.

Requirements—Naval—Copper.—Paymaster Hancock presented a memorandum giving the quantity of copper needed up to January 1, 1918. Referred to Mr. Weber.

Optical Glass—Supply of.—Paymaster Hancock presented a report relative to the supply of optical glass. Referred to Dr. Milliken.

The meeting adjourned at 11 a. m. o'clock.

———— ————, *Assistant Secretary.*

190 Minutes of Meeting of General Munitions Board held Tuesday, May 15, 1917, at 9 a. m., in the Munsey Building

There were present: Rear Admiral Zane; Rear Admiral Rousseau; Rear Admiral Capps; Commander Leigh; Commander Kearney; Paymaster Hancock; Lt. Col. Lemly; Dr. Holcomb; Mr. Scott; Mr. Howe; General Cruse; Colonel Dunn; Colonel Hodgson; Colonel Blunt; Colonel Fisher; Major Pierce; Major Wallace; Major Kelly; Dr. Simpson; Mr. Bolton, Secretary; and Mr. Scott, presiding. There were also present: Mr. Starrett, Mr. Lundoff, and Mr. Tuttle of the Emergency Construction Committee; Mr. Bulkely, Mr. Wahle, and Mr. Sager of the Legal Department of the Board.

The reading of the minutes of the previous meeting was dispensed with.

Cantonments.—Major Pierce presented the general subject of the number and location of sixteen so-called "training areas" throughout the country, stating that including the National Guard and regular cantonments, there would be thirty-two (32) cantonments and depots.

This subject was discussed at length and General Goethals came into the meeting upon request to give the Board the benefit of his ideas.

Mr. Starrett spoke of the work of the Emergency Construction Committee which had the plan of construction of cantonments in charge, and it was pointed out by Mr. Starrett that the loca-
191 tion of camp sites and decisions as to the type of buildings, and the necessity of relieving Colonel Littell of the Quartermaster Department from all work but cantonments, was most essential.

General Goethals concurred in the above, laying emphasis on the fact that the work should proceed under the management of competent officers, and selected for this work, who themselves should have charge of the details of surveying, location of buildings, etc.

Mr. Eisenman presented a motion that in the opinion of the Board: (a) at least three sites for cantonments be selected by the Government within five days from date; and (b) that it was recommended that two-story buildings for cantonments be approved.

Mr. Scott offered an amendment suggesting that the attention of the General Staff and the Secretary of War be called to the fact that it is not possible for work to be done on the cantonments unless the entire problem is delegated to someone to decide the location of the camps, types of buildings, the question of railroad facilities, etc., and recommending that an officer be delegated immediately to do these things.

After some further discussion Mr. Eisenman withdrew the second part of his motion and the following resolution, after being properly seconded, were carried:

Resolved, That in the opinion of the General Munitions Board it is imperative that at least three sites for cantonments be selected by the Government within five days from date; and

Resolved, That the General Munitions Board, through its Chairman, present to the Secretary of War, through proper channels, a statement to the effect
192 that in their judgment, immediate, definite action relative to cantonments is necessary, and that an officer should be designated to this work with full authority and power to arrange for the immediate construction of the necessary cantonments.

Prices.—A communication from the Quartermaster Department with reference to bids recently received regarding the supply of coal, gasoline, etc., for the fiscal year 1918 was presented and the matter ordered referred to Mr. Bulkley as counsel for the Board, with the request that Mr. Bulkley report back to Mr. Scott, who should have power to decide the matter.

Such action was authorized.

Precedence.—The Medical Corps presented a request that they be permitted to purchase 5,000 iron beds and cotton mattresses, and upon proper action such permission was granted.

Prices—Raw Materials.—Admiral Capps called attention of the Board to the fact that the price given on raw materials was not clear to contractors figuring on work for the Navy, and after some discussion it was suggested by the Chairman that action on this matter be deferred until the result of the decision of the Council at its meeting today on this question be known.

Mr. Summers spoke of the copper situation, advising that this matter had been taken care of by Mr. Baruch on the additional requirements of the Navy, and that contractors could be definitely told that the Government would supply copper at a definite maximum price, which information would be presented to the Navy departments in concrete form today by the Raw Materials Committee.

193 Spelter was also discussed, and it was stated that the Raw Materials Committee would endeavor to have satisfactory arrangements made on this commodity.

Embargo—Raw Material.—Mr. Summers advised, upon request, that the Raw Materials Committee was endeavoring to have the embargo on Australian wool and manganese released, that the State Department was also working with this end in view, but that the matter was being withheld by the desire of the Department of Commerce to arrange for the entire matter of embargo with the British Government at one time.

Priority.—Dr. Simpson presented a request from the Medical Section with reference to the delivery of a certain type of shears necessary in the manufacture of medical articles, on which it was requested that the General Munitions Board notify the manufacturer of such shears to give priority to that commodity.

This matter was ordered referred to the Priority Committee for decision.

The meeting adjourned at 10:30 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

194 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Wednesday, May 16, 1917, at 8:30 a. m., in the Munsey Building**

There were present: Colonel Dunn, Colonel Blunt, Colonel Hodgson, Major Pierce, Paymaster Hancock, Mr. Summers, Mr. Rosenwald, Dr. Millikan, Dr. Simpson, Mr. VanDervoort, Mr. Scott, Mr. Bolton, Secretary; and Mr. Scott, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Committee appointed—Accountants.—Mr. Scott advised that a committee of accountants chosen from the American Institute of Accountants had been transferred from the Advisory Council to the Munitions Board and were now to be considered as one of the subcommittees of this Board.

Such action was concurred in.

Raw Materials—Powder.—The Chairman presented a copy of a communication from Colonel Buckner, of the Du Pont Powder Company, to J. P. Morgan Company for the account of one of the Allies, offering certain quantity of guncotton, nitrocellulose powder, and T. N. T. to the Morgan Company, which proposition Colonel Buckner had asked that the Munitions Board approve before the matter had been finally presented to the Morgan people.

Such action was sanctioned by the Munitions Board in view of the fact that the Board is advised that the requirements of
195 both the Army and Navy for these commodities has been taken care of, during the period covered by the proposal to Morgan.

Priority—Forgings.—A communication from the Ordnance Department was presented to the Board relative to a conflict between the requirements of the army and the navy on forgings, due to request that certain forgings for the Fore River Shipbuilding Corporation, ordered from the Bethlehem Steel Company, be expedited, and after some discussion the matter was ordered held for further discussion until the meeting of the Board this afternoon.

Upon request by Mr. Scott, Mr. Rosenwald took the chair.

Optical Glass.—Dr. Milliken presented a report drawn by the Committee on optical glass. It was moved by Mr. Summers and promptly seconded:

That the National Research Council submit a letter to the General Munitions Board recommending the adoption of the report of the Optical Glass Committee, and that the General Munitions Board, concurring in this report, through its Chairman, present this report to the Secretary of War and the Secretary of the Navy, with a view to arranging for proper appropriations to cover the amounts called for.

Clearance—Raw Materials—Lumber.—A communication was presented from the Signal Corps asking clearance on 121,000,000 feet of southern pine lumber to be used in the construction of cantonments for aviation fields. This matter was referred to the Raw Materials Committee for attention and report.

196 *Prices—Lumber.*—A memorandum from the Bureau of Supplies and Accounts calling attention to apparently unwarranted increases in prices of lumber was presented and referred to the Lumber Committee for attention.

Raw Materials—Platinum.—Paymaster Hancock reported verbally on the inquiry of the Raw Materials Committee as to whether any inquiry for platinum had been made by the various departments, to the effect that none of the Navy Departments had made such inquiry.

Embargo—Flax.—A memorandum from the Priority Committee was presented in response to a request of the Munitions Board to investigate the complaint of the J. E. Barbour Company, of Paterson, N. J., regarding the embargo on flax, which report was ordered received and referred to the Raw Materials Committee.

The meeting adjourned at 9:30 a. m. o'clock.

CHESTER C. BOLTON, *Secretary*

196a **Minutes of Meeting of the Executive Committee of the General Munitions Board held Wednesday, May 16, 1917, at 2 p. m., in the Munsey Building**

There were present: Colonel Dunn; Colonel Blunt; Colonel Hodgson; Paymaster Hancock; Mr. Scott; Dr. Millikan; Mr. Bolton, Secretary; and Mr. Scott, presiding.

There were also present: Mr. Starrett, Mr. Lundoff, and Mr. Tuttle of the Committee on Emergency Construction of Buildings and Engineering works.

Building of Cantonments.—The Chairman spoke of the necessity of immediate action with reference to the building of cantonments, reporting as to a conference held with the Secretary of War in line with instructions of the Board through their action at the meeting of Tuesday, May 15, 1917.

Mr. Scott reported in substance that the Quartermaster General's Department, acting under instructions of the Secretary of War, had decided to place the cantonment problem in charge of one officer, probably Colonel I. W. Littell, with the understanding that the cooperation and facilities of the Emergency Construction Committee are to be given such officer, in fact, that the members of such committee are to act with this officer in such capacity as he might direct.

After some discussion by the various members of the Emergency Construction Committee, in which the opinions as to this work was outlined by each member, Mr. Scott requested Colonel Buckner,
Major Whitlock, Mr. Landis, and Mr. Eaton, all of the duPont
196b Company, to join the Board in their discussion on this subject, and give them the benefit of their experience in the creation of increased facilities at the duPont plant. After an informal discussion of the matter, the meeting adjourned at 2:30 p. m.

CHESTER C. BOLTON, *Secretary.*

30673—36—No. 6——7

197 **Minutes of Meeting of Executive Committee of the General Munitions Board held Thursday, May 17, 1917, at 8: 30 a. m., in the Munsey Building**

There were present: Colonel Dunn; Colonel Hudgson; Colonel Blunt; Major Pierce; Dr. Simpson; Mr. Scott; Paymaster Hancock; Mr. Rosenwald; Dr. Millikan; Mr. Bolton, Secretary; and Mr. Scott, presiding.

There were also present: Mr. Vauclain, Mr. Crowell, and Mr. King of the Artillery Committee.

The reading of the minutes of the previous meeting was dispensed with.

Prices—Cotton and Aluminum Goods.—A communication from the War Department was presented asking that the Munitions Board confirm prices on certain orders placed by the Ordnance Department for cotton and aluminum goods.

Orders for cotton were referred to Mr. Eisenman and for aluminum to Mr. Summers for confirmation and report to the Board.

Prices—Cotton Webbing.—A communication from Mr. Eisenman, of the Committee on Supplies, was presented, reporting the approval of the prices quoted the Ordnance Department by the Hope Webbing Company and ordered transmitted to the Ordnance Dept.

Committee membership.—A communication from Mr. Lundoff requesting that he be relieved from the Chairmanship of the Emergency Construction Committee, on account of his inability to give his
198 entire time to the subject, but advising that he is willing to continue his service on the committee, was presented and action in line with Mr. Lundoff's suggestion approved.

Mr. W. A. Starrett was appointed chairman of this committee in place of Mr. Lundoff.

Committee Membership.—A communication was presented from Mr. Hodges of the American Railway Association requesting that Mr. J. G. Rogers act with the General Munitions Board as representative of the American Railway Association.

Such action was approved.

Report—Industrial Situation in the Northwest.—A report was presented from Mr. Mather as to the conditions of the Lake Superior Iron Ore regions, which report was ordered filed, copy of same having been sent to Mr. Bielaski, of the Department of Justice.

Communication from Council of National Defense—Types of Artillery.—A memorandum from Mr. Gifford, of the Council of National Defense, was presented in response to the Board's inquiry as to the different types of small arms and artillery to be used by our troops, made under date of May 5th, stating that as this matter was now being discussed by our military authorities with the British Commission the resolutions of the Board had not been presented to the Council of National Defense.

Reports—Artillery and Ammunition.—A report was presented to the Board written by Mr. W. R. Layton, of the British Com-
199 mission and supplemented by data given by Colonel Kenyon as to the types of guns used in the British Army and the time necessary to produce guns sufficient for 36 divisions, according to the English regulations. This report was discussed, and it was suggested

that Mr. Layton, of the British Commission, be requested to confer on the matter with the Board. During the discussion the importance of knowing the types of guns to be used by our army in order to let contracts for not only forging but machining was pointed out.

Thereupon the meeting was adjourned until 10 o'clock a. m.

The meeting was called to order at 10 o'clock a. m., by the Chairman, and in addition to those already mentioned, Mr. Layton, and General Bridges, of the English Commission, and Mr. Baruch and Mr. Coffin were present.

Mr. Layton discussed the entire situation relative to gun production, pointing out the necessity of prompt action, and calling attention to the time necessary to insure successful production on a large scale.

General Bridges further spoke on this subject, urging upon the Munitions Board the necessity of more prompt action.

The matter of plant facilities in this country was discussed by Mr. Layton with the members of the Board, and it was pointed out by Mr. Layton that it would be necessary for this country to arrange for increased facilities for gun production in order to obtain satisfactory results.

200 The meeting adjourned at 11: 30 o'clock a. m.

(Detailed report of this adjourned meeting is appended herewith.)

CHESTER C. BOLTON, *Secretary.*

201 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Friday, May 18, 1917, at 8: 30 a. m., in the Munsey Building**

There were present: Colonel Blunt; Colonel Hodgson; Major Pierce; Paymaster Hancock; General Aleshire; Dr. Millikan; Dr. Simpson; Mr. Scott; Mr. Bolton, Secretary; and Mr. Scott, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Rifles—Production at Eddystone Works.—A communication was presented from Mr. Vauclain regarding the Remington Arms Company's Eddystone Works, showing in substance that the order for British rifles which that plant had should be finished by June 7th, and inspection of such rifles finished so that the British may be able to withdraw from the plant not later than June 30, 1917.

This communication was accepted and referred to Colonel Blunt for his information.

Gun Forgings—Report of Progress.—A communication from Mr. Ingraham, Assistant Secretary of War, was submitted, advising that the communication from the Chairman of the General Munitions Board under date of May 11th, asking that the Bethlehem Steel Co. be authorized to proceed at once with the enlargement of their forging department, has been approved by the Secretary of War, noted by the Chief of Ordnance, and transmitted to the Secretary of the Navy for his action.

202 *Raw Materials—Steamer for War Department.*—A communication from the Secretary of War was presented, advising that that Department intended inviting proposals for the construction of a combined water boat and harbor steamer for service at certain forts defending the Harbor of San Francisco, and asking that this Board advise as to the practicability of obtaining steel plates and shapes for this vessel as expeditiously and economically as practicable.

This matter was ordered referred to the Secretary of this Board to ascertain from Mr. Bonner of the Steel Committee, both price and delivery on the tonnage required, and also whether such delivery could be made without interfering with other Government order, and report to the Board.

Raw Material—Labor Conditions.—A communication from the National Association of Wool Manufacturers, Boston, Mass., was presented, calling attention to the strikes of skilled workmen at various plants under contract for shirting flannel and uniform fabric for the Army, which strikes were apt to threaten delay in filling such orders.

This matter was referred to Mr. Gifford, Director of the Council of National Defense, in order that this delay in the securing of material for Government purposes might be brought to the attention of the Council.

Clearance—Signal Corps.—A memorandum from the Signal Corps was presented asking clearance on certain amounts of army duck to be used for field hangars, as delivery of this material would conflict with certain materials for the Quartermaster Department.

This matter was ordered referred to the Priority Committee for decision.

203 *Artillery Committee—Progress Report.*—A progress report from the Committee on Army and Navy Artillery, under date of May 16th, was presented to the Board, showing the progress of that committee to date. This report was ordered received and filed.

In connection with this matter the Chairman advised that he anticipated being able to advise the Board not later than tomorrow as to the action of the Secretary of War with reference to the artillery situation and hoped that at that time authority would be granted the Board to definitely proceed in its arrangements for production.

Raw Material—Silk Fabric.—A report from Mr. Cheney, of Cheney Bros., was presented to the Board, dealing with the available supply of this material in this country for the requirements of the Army and Navy Departments. This report was ordered referred to the National Research Council for such attention as that Board might deem necessary and a digest of the report ordered submitted to the Ordnance Department.

Clearance—Supplies.—Paymaster Hancock requested clearance on a quantity of unbleached drill for the Navy Department, which had already been referred to Mr. Rosenwald and approved by his committee. Request for such clearance was granted.

Recommendations—Inter-Ally Committee on Inventions.—Recommendations from the National Research Council suggesting two members to act on the Inter-Ally Committee on Inventions at Paris, was presented to the Board, being in response to a

204 letter to this Board received from the War Department, under date of May 13, 1917.

The recommendations of the Research Council were ordered referred to the Advisory Commission for action.

The meeting adjourned at 10 a. m.

(Signed) CHESTER C. BOLTON,
Secretary.

205 **Minutes of Meeting of the General Munitions Board held Saturday, May 19, 1917, at 9 a. m., in the Munsey Building**

There were present: Rear Admiral Capps; Rear Admiral Zane; Commander Leigh; Commander Kearney; Paymaster Hancock; Colonel Fisher; Lt. Col. Lemly; Dr. Holcomb; Major Wallace; Major Pierce; General Cruse; General Aleshire; Colonel Blunt; Colonel Hodgson; Dr. Millikan; Dr. Simpson; Mr. Rosenwald; Mr. Coffin; Mr. Scott; Mr. VanDervoort; Mr. Bolton, Secretary; and Mr. Scott, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Prices—Ordnance Department.—The Chairman advised that the Ordnance Department desired that the Board pass upon prices and combinations of location, etc., in connection with the bids recently requested on 3″ shrapnels and high explosives, and further stated that a list of the prices quoted by various manufacturers would probably be submitted to the Board early next week.

Committee.—It was suggested that the committee on Army and Navy Projectiles, of which Mr. Vandervoort is Chairman, be enlarged to include Colonel Dunn, Commander Kearney, Mr. Barba, and Mr. Howe, which committee act in line with the suggestion of the Ordnance Department, with power.

Motion to this effect was properly carried.

206 *Precedence of Orders—Army & Navy.*—A communication from the Secretary of the Navy was presented announcing the order of precedence of work involved in the preparations for war under the Navy Department's cognizance, which communication was ordered received.

Committee.—Upon motion of Mr. Coffin and properly seconded, the following was carried:

That under the Priority division a committee on small machine tool precedence be established, to be guided by the above-mentioned letter, together with other indications of governmental policy of which the Board had been informed.

It was further suggested that the War Department be asked for a table of precedence similar to that outlined by the Navy; and upon motion, properly seconded, such action was carried.

Communication from Mr. Coffin.—Mr. Coffin presented a communication to the Board relative to the conditions prevailing abroad and particularly urging the necessity for prompt action.

Cantonments.—Colonel Littell came into the meeting at this point and spoke of his authority to proceed with the contonment work inde-

pendent of all other duties in the Quartermaster Dept., further stating that authority should be delegated him to call upon reserve officers to help in this work.

It was pointed out that thirty-two (32) cantonments were to be built, each to accommodate between 25,000 and 30,000 men, and that already seven (7) specific sites for these cantonments had been located, of which the Board had been advised.

207 After some discussion, it was properly moved and carried—

That the General Munitions Board will do anything possible, within the scope of the Board, to forward the work delegated to Colonel Littell.

Office Space.—The general question of office space was discussed, during which it was pointed out by Mr. Coffin that the Munitions Board was the logical source of recommendation for space and suggested that it recommend (a) That the power to commandeer proper space be provided by legislation; and (b) That a comperhensive survey of the situation and needs be made and that erection of temporary buildings in parks or near present department buildings be considered.

Mr. Coffin also spoke at some length with reference to aeroplanes and the work involved in their manufacture and the need for public education in that subject.

Committee.—It was moved and seconded that a committee consisting of Mr. Coffin, Admiral Capps, Colonel Hodgson, Commander Kearney, and Major Wallace be appointed (with the understanding that the Chairman is empowered to increase this committee if he deems such action wise) to make a careful survey of the question of space and report at the meeting of the General Board to be held on Thursday, May 24, 1917.

Such motion was properly carried.

Clearance.—A communication was presented from the Signal Corps requesting release in awarding several contracts for aviation flying field cantonment buildings, for which contracts on a basis of cost-plus percentage were to be used.

In view of the fact that it was pointed out by Colonel
208 Littell and others that there would be no conflict with the work of the cantonments elsewhere, such clearance was granted.

Clearance.—A list of items on which shortage existed, which was drawn up by the Board on May 1st, was presented with a view to determining whether any items might be eliminated or whether any additions should be made to such list.

It was decided to keep the list of May 1st, with the addition of optical glass, and the Secretary was further requested to so advise each member of the Board.

Clearance—Optical Glass.—Major Wallace spoke of the order which he had placed for optical glass with the Bausch and Lomb Company, for the use of the Signal Corps, which order was sanctioned and cleared by the Board.

Priority—French 75 m/m Jackets.—A communication was presented to the Board, addressed to the French Purchasing Commission from Bethlehem Company, regarding 800 jackets for 75 m/m guns which the French Government was anxious to procure.

Although this matter was a subject for the Priority Committee, it was suggested that it be referred to the Committee on Army and

Navy Artillery, together with Major Pierce, with power to act, as that committee was entirely familiar with the requirements for guns. Such action was approved.

Industrial Policy.—The Chairman presented a draft of a communication to be presented at a joint meeting of the American Society of Mechanical Engineers and the National Machine Tool Builders Association, outlining briefly the policy and program which engineers and machine-tool manufacturers should follow at the
209 present time, which was concurred in by the Board.

Industrial Reserve.—The Matter of Industrial Reserve was again discussed, and Major Pierce reported that in answer to questions presented to the Secretary of War as to the policy in restricting the proselyting of recruits for the Army at plants, and also restricting technical men and those important for industry, the Secretary stated that it was his firm belief that no limitation of instructions should be given recruiting officers at this time.

It was pointed out by several members of the Board that this was a very serious problem at this time and that requests for help had been received by manufacturers from all over the country.

Mr. Coffin suggested a plan which had in general the creation of local or district tribunals whose duties it would be to hear the protests of employers of men conscripted while in their employ and necessary to their plants, and further advising that it was desired that no political influence was to be used in the appointment of these local bureaus. Consequently, it was requested that as little as possible be said regarding this suggestion.

It was suggested that all matters of Industrial Reserve be referred to Mr. Coffin or his department, which action, upon motion properly seconded, was carried.

Prices—Method of Determining.—The Chairman presented a joint communication from the Secretary of War and the Secretary of the Navy, advising the Board of a method of determining prices and providing for the stimulation of production which the War Department and the Navy Department wished to use in placing contracts for munitions and supplies insofar as practicable.

210 This communication was ordered filed and a copy sent to each member of the Board and to the Chairman of each subcommittee of the Board.

Prices.—Mr. Howe spoke of the announcement which had been recently called to the attention of the Secretary of the Navy to the effect that a 25% increase in price of steel casting was to be put in effect July 1st.

Mr. Scott spoke of the plan of the price-problem committee, which would automatically take care of this disturbance if adopted, which plan would be discussed at the meeting of the Council on Monday. No action was taken in this matter.

Priority—Coal.—A communication from the Quartermaster Department was presented to the Board with reference to a complaint from Thomas Wolsteinholme Sons and Company as to their inability to procure sufficient coal to operate. In view of the fact that this company was producing flannel for the Government, the matter was ordered referred to the Priority Committee for such action as they saw fit to make.

The Chairman announced that the next general meeting of the Board would be held on Thursday, May 24, 1917, at 9 a. m.

The meeting adjourned at 11 o'clock a. m.

(Signed) CHARLES C. BOLTON,
Secretary.

211 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Monday, May 21, 1917, at 8: 15 a. m., in the Munsey Building**

There were present: Paymaster Hancock; Colonel Hodgson; Colonel Blunt; Major Pierce; Mr. Summers; Dr. Simpson; Mr. Coffin; Mr. Bolton, Secretary; and Paymaster Hancock, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Price Situation.—The Secretary presented a communication from Mr. Gifford concerning the public announcement as to the policy of the Government in connection with prices, advising that it had been agreed that the Council should take no action with reference to the price question, pending its consideration by the President and Congress.

Priority Committee.—The Secretary presented a resolution adopted by the Council of National Defense under date of May 18, 1917, to the effect that representatives of the Department of Agriculture, Commerce, and Interior now delegated to serve with the Railroad Committee in determining priority, be called upon by the Priority Committee of the General Munitions Board to sit with them whenever necessary to pass on questions of priority other than those per-
taining to the army and the navy, and further stating that
212 it was agreed for the present, that questions of priority affecting civilian needs in which the Army and Navy are not involved, should be referred for determination to the Priority Committee of the General Munitions Board, but that it had been decided that the placing of authority for determination of questions of priority as between the Allies and our civilian needs should be deferred until development of the general plans now under consideration.

This communication was ordered filed and the Secretary requested to notify General Aleshire of the Committee on Priority, as to this action.

Army requirements—Trucks.—A communication from the White Motor Company regarding the recent bids on motor trucks sent out by the Quartermaster Department, was presented to the Board and this matter ordered referred to Colonel Baker of the Quartermaster Department with a request that a report be given the Board at tomorrow's meeting, advising whether the points raised in the letter by the White Motor Company are correct.

Raw Material—Lumber.—A communication from the Navy Department reporting the availability of a cargo of approximately two million feet of Douglas fir lumber about June 1st, was presented and ordered referred to the Lumber Committee and also to Colonel Littell.

Raw Material—Linseed oil, turpentine, and benzine.—A communication from the Bureau of Yards and Docks was presented showing

an estimate of the above, required by this Bureau, and ordered referred to Mr. Summers of the Raw Materials Committee. The report showed that there was apparently no necessity for
213 action in the matter of turpentine and benzine, but that regarding linseed oil it was considered advisable to investigate the market conditions with a view to determining more desirable prices.

Clearance.—Paymaster Hancock presented a memorandum requesting clearance on a small tonnage of castings and also a small amount of wire rope required by the Bureau of Construction and Repairs, both of which items were approved.

Clearance.—Colonel Hodgson requested clearance on some leather required by the Quartermaster Department, which action was sanctioned with the understanding that this matter would not interfere with Mr. Eiseman's requirements for shoes.

Priority.—Colonel Blunt presented a communication from the Ordnance Department requesting aid on the delivery of machine tools, also requesting help in having the transportation of scrap to the Watertown Arsenal expedited.

Both matters were ordered referred to the Priority Committee.

Army requirements—Optical Glass.—A communication from the Bureau of Ordnance, advising the amount of optical glass required by that Department to meet the requirements for equipping one million men, was presented to the Board and ordered filed with further instructions that the information given in this report be imparted to the Optical Glass Committee.

Artillery—Machining.—A communication from the Committee on Army and Navy Artillery was presented, advising that that
214 committee was now ready to put in final form several contracts for machining guns, but had not as yet received definite information as to the number and types of guns required, and asking that assistance be rendered in having this important information promptly settled.

The matter was referred to Major Pierce for attention and report.

The meeting adjourned at 9: 30 a. m.

(Signed) CHESTER C. BOLTON,
Secretary.

215 **Minutes of Meeting of the Executive Committee of the General Munitions Board held on Tuesday, May 22, 1917, at 8: 30 a. m., in the Munsey Building**

There were present: Colonel Blunt; Major Pierce, Paymaster Hancock; Mr. Summers; Dr. Simpson; Mr. Rogers; Colonel Hodgson; Mr. Bolton, Secretary; and Major Pierce, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Committee Membership—Emergency Construction.—The secretary reported as to the request from Mr. Starrett, Chairman of the Emergency Construction Committee, that the Board sanction the appointment of Mr. F. L. Olmsted and Major Kelley as members of his committee, which action was approved.

Priority—Shortage of Tin.—A memorandum from the Priority Committee was presented stating that it was decided not to recom-

mend that a change be made at this time in the specifications for boilers and dippers for the Quartermaster's Department. This report was ordered filed.

Priority—Precedence of Delivery of Machinery for Allies' requirements.—A communication from the Priority Committee was presented regarding material on order for England and Italy, reporting that, in the opinion of the Priority Committee, the question of priority on this material did not fall under their jurisdiction.

216 The report was ordered filed, with a request that this information be transmitted to the Council of National Defense as an example of the need of power being given the Priority Committee on such matters.

Raw Materials—Ammonium Picrate.—A memorandum was presented from the Raw Materials Committee in response to a communication from the Board under date of May 12th, advising that, in the opinion of the Raw Materials Committee, the papers submitted to that committee relative to the price of ammonium picrate which the Ordnance Department considered fair and just as outlined in a communication from the Ordnance Department under date of May 5 (File No. 334.1/63), was reasonable, and recommending that contracts be made as outlined.

Such report was ordered received and the Ordnance Department notified accordingly.

Progress Report—Bethlehem Steel Co.—A report was submitted from Major Jamieson commenting on the Bethlehem Steel Company relative to increased facilities, which report was ordered filed.

Raw Materials—Caustic Soda.—A memorandum was presented by Paymaster Hancock with reference to 3,600 tons of caustic soda required by the Navy Department, regarding which difficulty was being experienced in securing a sufficient amount.

This matter was referred to the Chemicals Committee for investigation and report to the Board.

217 *Clearance—Lumber.*—A memorandum was presented by Paymaster Hancock relative to procuring clearance on a certain quantity of lumber and approval of prices named by the West Coast Lumber Company.

This clearance was approved and the matter of prices referred to the Lumber Committee.

Raw Materials—Khaki Canvas.—A memorandum was presented from the Surgeon General relative to khaki canvas required for immediate use for gas masks.

This matter was referred to Mr. Rosenwald's Committee for immediate report.

Advisability of purchase of California Canned Vegetables.—A memorandum from the Committee on Supplies was presented relative to the advisability of a contract purchase of California canned vegetables at this time; also relative to the can supply for same, reporting in substance that it did not seem advisable to make canned vegetable contracts at the present time in only one section of the country, and that it was not possible to secure from can companies assurance of sufficient supply of cans for one contract.

This report was ordered filed, its substance having been transmitted to the Quartermaster Department of the Army.

Cantonments.—An informal discussion took place relative to cantonments, during which Capt. Marshall came into the meeting and discussed questions in connection with this matter with Mr. Rogers, the principal questions asked being relative to the amount of material required, location of cantonments, and the necessary trackage.

The meeting adjourned at 9:15 a. m.

(Signed) CHESTER C. BOLTON,
Secretary.

218 Minutes of Meeting of the General Munitions Board held Wednesday, May 23, 1917, at 8:30 a. m., in the Munsey Building

There were present: Paymaster Hancock; Colonel Blunt; Colonel Hodgson; Major Pierce; Dr. Simpson; Mr. Summers; Mr. Coffin; Mr. Bolton, Secretary; and Paymaster Hancock, presiding.

The reading of the minutes of the previous meeting was dispensed with.

Clearance—Lumber.—The Secretary presented a memorandum addressed to the American Railway Association, asked that clearance on five carloads of wood for shipment to the National Carbon Company of Cleveland, to be used in the production of charcoal for gas masks, be granted, and also that the action of expediting the shipment be approved.

Such request was granted.

Cantonments.—A memorandum was presented calling attention to the fact that Colonel Littell had not been relieved from all duties at the Quartermaster Department, and was therefore not free to give his entire time to the cantonment question.

This matter was referred to Colonel Hodgson for attention.

Raw Material—Copper.—A memorandum was presented from the Signal Corps calling attention to the fact that while the Signal Corps had advised sometime ago that its requirements for an army of one million men for the first year would amount to 2,800

219 tons of copper, and for an army of two million men the second year, 3,000 tons of copper, it had been allotted only 110,000 pounds of that material, and asking that the Munitions Board advise if the Signal Corps can be furnished with 320,000 lbs. of copper at an early date, for the manufacture of wire to be shipped abroad. The matter was referred to Mr. Summers for report.

Raw Materials—Steamer for War Department.—A memorandum from Mr. Bonner, representing the Steel Committee, with reference to the Board's inquiry as to price and delivery on material required for a harbor steamer to be purchased in the near future by the War Department, was presented to the Board and its contents ordered transmitted to the War Department.

Clearance—Lumber.—A memorandum from the Engineers Corps was presented asking authority to make awards on 475 M feet of rough, short-leaf pine for use in the construction of the Key Bridge across the Potomac River. This matter was ordered referred to the Lumber Committee for report.

Legislation—Proposed Law affecting Munitions Plants.—A telegram from Governor J. H. Cornwell of Charleston, W. Va., was

presented, calling the attention of the Board to pending legislation before the West Virginia Legislature, intending to impair the Public Service Commission of that State and prohibiting the transportation of gas. This action would particularly affect manufacturers of munitions in the states of Pennsylvania and Ohio.

The matter was referred to the Legal Department of the Board for report.

220 *Shortage TNT.*—The Secretary presented a memorandum to the effect that in a conference with the DuPont Company it had been pointed out that a shortage existed in both crude and refined TNT. This matter was ordered referred to Mr. Summers for vertification and report to the Board.

Orders Placed—Cast Iron Target Practice Projectiles, cartridge storage cases, silk cartridge cloth, etc.—A memorandum was presented from the Ordnance Department advising of orders placed for 16,200 cast-iron target practice projectiles for seacoast cannon, 33,100 cartridge storage cases and 680,000 yards of silk cartridge cloth.

This report was ordered filed, with a further request that the information given therein be reported to the various committees interested.

Raw Materials—Lead.—A memorandum from Colonel Blunt was presented, advising that recommendation for awards of shrapnel, etc., for 3-inch field guns contemplates that the contractors are to secure their own raw material. This communication was in response to an inquiry raised by the Ajex Metal Company of Washington, D. C.

The lead situation was discussed at some length regarding the advisability of commandeering sufficient lead for army and navy requirements.

The Secretary was requested to secure a report from the Raw Materials Committee on this subject, such report to deal with not only the approximate requirements of the army and navy, but also the approximate tonnage of lead which would be required by Colonel Littell in connection with the cantonment plan.

221 *Prices—3" Shrapnels and High Explosives.*—The Secretary reported that a conference had been held between Mr. Van Dervoort's committee and representatives of the Ordnance Department, at which meeting the proposals submitted under date of May 15th were discussed.

The Secretary further advised that the Committee had decided to call together several of the low bidders on these shells for a conference to be held Thursday, May 24th.

Army Requirements—Trucks.—A copy of a letter addressed to the White Company of Cleveland, in response to a communication written by that company to the Quartermaster Department, Chicago, was presented to the Board, which communication dealt with the recent request for bids sent out by the Quartermaster Department. The matter was ordered referred to the Automotive Committee, of which Mr. Zimmerschied is Chairman, with a view to having that committee report their opinion on the matter to the Board at its general meeting to be held tomorrow.

Artillery.—The Secretary presented an additional memorandum received from Mr. Layton of the British Ministry of Munitions, giving data on materials required for the fabrication of artillery ammunition and trench warfare, which report was ordered received and filed.

After an informal discussion as to the status of the various subcommittees related to the General Munitions Board, the meeting adjourned at 10 a. m.

(Signed) CHESTER C. BOLTON,
Secretary.

222 Minutes of Meeting of the General Munitions Board held Thursday, May 24, 1917, at 9 a. m., in the Munsey Building

There were present: Admiral Capps; Admiral Rousseau; Admiral Zane; Commander Leigh; Commander Kearney; Paymaster Hancock; Dr. Holcomb; Mr. Howe; Lt. Col. Lemly; Mr. Rogers; Mr. Coffin; Mr. Scott; General Cruse; General Aleshire; Colonel Hodgson; Colonel Blunt; Colonel Dunn; Colonel Fisher; Major Pierce; Major Kelley; Major Wallace; Dr. Simpson; Mr. Summers; Mr. Bolton, Secretary; and Mr. Scott, presiding. There were also present: Mr. Vauclain of the Committee on Army and Navy Artillery, and Mr. Barba of the Committee on Projectiles.

The reading of the minutes of the previous meeting was dispensed with.

Medical Requirements—Surgical Instruments, etc.—Dr. Simpson reported on the requirements of the Medical Section for surgical instruments, stating that this matter was well in hand and that production of the necessary instruments could be made in sufficient quantities to satisfy the requirements.

Raw Materials.—Dr. Simpson advised that action should be taken with reference to the embargo still in effect on needles, opium, and cocaine, and was advised that the Department of Commerce was endeavoring to negotiate with the British Government on these subjects in connection with the embargo problem as a whole.

223 *Ambulances.*—Colonel Fisher advised that the program for 2,500 ambulances required for the Medical Section was in very satisfactory shape, that arrangements had been made with the Ford Motor Company to supply these ambulances at an early date, and also that assurances of delivery of the total amount within six weeks had been received.

Cantonments.—The matter of cantonments was discussed, particularly with reference to specifications for the two-story houses, and also regarding railroad facilities.

Mr. Rogers advised that the railroads were in satisfactory shape at the present time with reference to the requirements needed for these cantonments, and that it would not be necessary for the Board to lend their assistance in procuring the necessary equipment at this time.

The attitude of the civilians with reference to the price of land required for cantonments was commented upon.

Forgings—A communication from the Secretary of the Navy.—The Chairman presented a communication from the Secretary of the Navy with reference to the question of forgings, approving the

recommendation of the General Munitions Board as outlined in its letter of May 11th, to the Secretary of War and to the Secretary of the Navy, covering proposals for gun forgings from the Bethlehem Co.

In connection with this matter, Mr. Vauclain reported that the Bethlehem Steel Company had advised that they could produce an additional ten million pounds of forgings within about six months' time, and further that the Artillery Committee had now
224 developed additional facilities for approximately twenty-five million pounds of forgings, including the production of ten million pounds from the Bethlehem Steel Company and the Midvale Co.

Communication Addressed to the Midvale Co.—The Chairman presented a letter addressed to the Midvale Steel Company under date of May 23, directing that company to proceed with the manufacture of five million pounds of gun forgings with the understanding that an amount not exceeding $900,000 might be expended for the necessary buildings and equipment.

Upon motion properly seconded, it was voted to recommend to the Ordnance Department that such letter should be sent to the Midvale Co.

Motion regarding recommendation to Ordnance Department.—During the discussion of the question of artillery it was pointed out that definite information on the amount of ammunition required was essential, and the following motion was properly seconded and carried, i. e.:

Resolved, That the Artillery Committee withhold recommendations to the Ordnance Department regarding the production of guns and the necessary equipment thereof, until the General Munitions Board receives an approved memorandum showing the type and number of guns to be used by our army, and further if a memorandum on this subject has already been sent to the Ordnance Department, the attention of the Chief of Ordnance be called to the fact that another memorandum on this subject will be submitted when the definite information as to guns and ammunitions required, is secured.

Army Requirements—Ammunition.—Colonel Dunn reported verbally, relative to the bids recently submitted, on three and one-half million rounds of 3″ shrapnels and three and one-half million
225 high-explosive shells, advising that material could be secured within a satisfactory period of time and that the price compared favorably with former purchases but stating that the Committee was troubled by the fact that it did not seem desirable to distribute the business by component parts, as such action would mean the closing of unit plants. On the other hand, if the orders were placed for complete rounds, such action would have a bad effect on the plants making only component parts.

Colonel Dunn further reported that the amount of ammunition involved was based on the estimate of the Treat Board program, which figure, as pointed out by several, should be largely increased.

A general discussion took place, during which it was pointed out that it was very bad policy to lose advantage of the productive plants now operating throughout the country, and also that it was bad policy to place orders in one locality, which action had been condemned by the General Staff.

Questions were also raised as to whether the calibres requested in these bids were correct, and also whether the quantities specified were sufficient.

The necessity of placing contracts for this ammunition at once was called to the Board's attention, and the advantage of the flat price against the cost-plus-percentage basis.

Upon motion properly seconded, the following resolution was carried:

226 *Resolved*, That the General Munitions Board is under the impression that the quantity called for in the bids for 3″ shrapnel and 3″ high explosives of May 15th is not sufficient and if the Chief of Ordnance wishes the cooperation of the General Munitions Board in endeavoring to have the quantity increased, the Board will be willing to concur with the Chief of Ordnance in such recommendation, or to initiate such action if desired; and further that as this matter calls for immediate action, that this Board take such steps as may insure orders being placed at once on the basis of prices bid, or else on adjustment based on the bid prices.

Such action was carried.

The Chairman appointed Colonel Dunn and Major Pierce to confer with the Ordnance Department at once on this subject and to report to Mr. Van Dervoort's Committee, who were to meet on this subject this morning.

Army Requirements—Rifle and Pistol Ammunition.—Colonel Blunt reported verbally with reference to the fact that negotiations for rifle ammunition contracts had been carried forward and that contracts were now ready for the approval of the General Munitions Board, and, if satisfactory, for transmission to the Chief of Ordnance. Such negotiations had been held with five manufacturers.

The form of contract for rifle ammunition was based on the form of contract for small rifles, the compensation being based on a flat price subject to a percentage for profit and adjustments, based on the cost of material.

Colonel Blunt further reported that the amount of orders now anticipated were about 54% of the capacity of the five plants.

Regarding pistol ammunitions, Colonel Blunt advised that the same prices had been agreed upon on this ammunition as had
227 been named on previous bids, although the cost of labor and material had advanced considerably in the meantime.

Colonel Blunt further reported that a Purchase Committee had been formed by the manufacturers and that negotiations had been carried on for the purpose of obtaining material necessary to the production of this ammunition as advantageously and as promptly as possible.

This Purchase Committee consists of representatives from each of the companies involved, together with a representative from the Ordnance Department, which committee would make all purchases for the supply of materials necessary in manufacturing rifle and pistol ammunition.

Upon motion properly seconded the following resolution was carried, i. e.:

That the program regarding the plan of contracts and purchase, as outlined by Colonel Blunt, be approved by the General Munitions Board.

Prices—Copper.—Admiral Capps spoke on the matter of copper and prices pertaining thereto, calling attention of the Board to his

understanding that arrangements had been made whereby a maximum price on the requirements of copper for the Navy had been fixed and that contractors could be definitely told that the Government would supply copper at a definite maximum price.

Mr. Summers corroborated Admiral Capps' understanding.

Forgings—Progress report on Bethlehem Steel Co.—The Chairman presented a report submitted by Major Jamieson, with reference to the work done by the Bethlehem Company as to preparation for additional facilities for machining.

228 The receipt of this report was ordered spread on the Minutes, and made as outlined:

Resolved, That the General Munitions Board express to the Bethlehem Steel Company its appreciation of the action of that company in carrying out the desires of the General Munitions Board and the Ordnance Departments of the Army and the Navy to such a satisfactory degree.

Such motion, being properly seconded, was carried.

Office Space.—Mr. Coffin reported for the committee recently appointed by the Board to report regarding the proposition of office space, stating that upon advice from the Director of the Council of National Defense this committee has been dissolved in view of the fact that a committee known as the "Inter-Departmental Committee", of which Mr. Gifford is Chairman, already existed, which committee had charge of such matters as had been referred originally to Mr. Coffin.

The dissolution of Mr. Coffin's committee was properly authorized.

Raw Materials—Lead.—A suggestion was offered that the representatives of the Departments of the Army and Navy confer with an idea of commandeering a quantity of lead during the months of May and June.

The Chairman suggested the appointment of a committee consisting of Mr. Summers, Colonel Blunt, Paymaster Hancock, and the Chairman of the Lead Committee, which action, upon motion properly made and seconded, was authorized.

229 *Prices—Coal.*—A communication from the Quartermaster Department was presented to the Board, in which communication it was pointed out that certain posts of the army were unable to have any bids submitted on their requirements for anthracite coal.

This matter was referred to Mr. Peabody, of the Coal Committee, for report.

The meeting adjourned at 11:15 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

230 **Minutes of Meeting of the General Munitions Board held Friday, May 25, 1917, at 8:30 a. m., in the Munsey Building**

There were present: Colonel Blunt; Colonel Hodgson; Major Pierce; Paymaster Hancock; Dr. Simpson; Dr. Millikan; Mr. Summers; Mr. Rosenwald; Gen. Aleshire; Mr. Scott; Mr. Bolton, Secretary; and Mr. Scott presiding. There were also present: Mr. Vauclain and Mr. Van Dervoort.

The reading of the minutes of the previous meeting was dispensed with.

Cantonments.—A report was presented by Mr. Starrett, of the Emergency Construction Contract Committee, calling attention to certain lines of industrial activities, the products of which were necessary to the building of these cantonments and with which activities the Board had no direct contact.

Mr. Starrett's report was to the effect that duly authorized committees representing these various activities be appointed. A general discussion took place, during which the various material needed in the cantonments was discussed, and it was stated by Mr. Starrett that plans had been made for lining the wooden buildings that would prevent exposure and be an insurance against check and cracking.

Mr. Starrett was requested to draw up a plan showing definitely the organization of the various committees suggested and re-

231 quired for the cantonment work, which scheme was to be presented to the Board for approval.

In connection with the cantonment work a communication from Mr. Starrett was presented advising of a telegram from the Van-Couver Barracks regarding labor troubles in the cantonment construction at that point. It was decided that this was a matter entirely within the jurisdiction of the Quartermaster Department, and was referred to Colonel Hodgson for conference with that Dept.

Cost Accounting.—A letter was presented from the Secretary of Commerce calling attention to a meeting of Cost Accountants today and requesting representation from this Board.

Mr. Ludlam, of the Cost Accounting Committee, was notified to come into the meeting, and, after the matter had been explained to him, was requested to represent the Board at the above-mentioned meeting this morning.

Mr. Ludlam was advised that the Board's distinct preference as to the policy to be pursued in cost accounting was the policy outlined in the Munitions Tax Law, and further was informed that while the Board was willing to cooperate in this matter in any way possible, it had formed its own accounting committee principally to determine the method of finding costs in connection with munition contracts.

It was further suggested that Mr. Summers attend this conference with Mr. Ludlam, if possible.

Cantonments—Laundry Machinery.—A memorandum from Mr. Starrett was presented calling attention to the advisability of forming a committee of manufacturers of laundry machinery and making certain suggestions as to the personnel of such a committee.

232 This matter was ordered referred to the Bureau of Construction and Repairs as to their opinion of the personnel suggested, and it was further requested that such reference be made by Mr. Starrett.

Machine Guns.—A communication was presented to the Board addressed to the Machine Gun Committee of the Munitions Board by the Marlin Arms Company regarding the ability of that company to produce the Browning water-cooled automatic machine gun.

After some discussion the Secretary was instructed to acknowledge receipt of this letter to the Marlin Arms Co., and refer the matter to Mr. Hanson and Mr. Little, of the Machine Gun Committee, for report and recommendations.

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Such action was moved and carried.

Army Requirements—Ammunition.—Mr. Van Dervoort reported verbally with reference to the conference held with certain ammunition manufacturers yesterday advising that by the authority of General Crozier to increase the requirements from seven million to nine million shells his committee believed that orders for this amount could be placed so that the Ordnance Department's action would be satisfactory to the various manufacturers and would to a large degree keep present large plants in operation.

During the discussion it was pointed out that in the opinion of the Board it was most important, first, that the committee under Mr. Van Dervoort, which was considering bids on this shell and shrapnel, recommend the adoption of nine million shells as a basis; and second, that the committee give serious consideration to the
233 General Staff's suggestion that plants operating in so-called "safe areas" be continued in business by having contracts awarded them.

Artillery.—Mr. Vauclain reported verbally as to the conference held yesterday with General Crozier, pointing out that General Crozier had decided that instead of the cost-plus contract for production of big-gun forgings and for machining big guns, he preferred a contract covering the cost plus a flat profit.

Priority—Coal.—A communication was presented from the Du Pont Powder Company, calling attention to the coal supply for the Hopewell Works, which matter was referred to General Aleshire for attention, with the understanding that this was a matter for the Priority Committee to decide, and that as this company was producing powder both for the Allies and the United States the action as outlined above was to be considered as a precedent in that it was intended to expedite material necessary for the work to be done for this Government.

The meeting adjourned at 10 o'clock a. m.

CHESTER C. BOLTON, *Secretary.*

234 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Saturday, May 26, 1917, at 8:30 a. m., in the Munsey Building**

There were present: Paymaster Hancock; Colonel Blunt; Colonel Hodgson; Mr. Summers; Dr. Simpson; Dr. Millikan; Mr. Rosenwald; Mr. Coffin; Mr. Scott; Mr. Hine, acting Secretary; and Mr. Scott, presiding. Mr. Van Dervoort was also present.

The reading of the minutes of the previous meeting was dispensed with.

Army requirements—3" ammunition.—A copy of a letter to the Chief of the Ordnance Department from the General Munitions Board was read regarding the awarding of artillery ammunition contracts.

This letter was adopted with the exception of the paragraph reading:

The remaining 750,000 should be ordered at a price not to exceed $3.85, from a company or companies to be determined, preferably a plant or plants west of the Allegheny Mountains, and among the companies considered should be the Westinghouse Electric Co. and the Worthington Pump and Machinery Corporation.

which paragraph was ordered changed to read:

The remaining 750,000 should be ordered at a price of $3.79 from the Worthington Pump & Machinery Corporation.

235 *Policy in Contracts.*—In connection with the discussion on ammunition, it was decided that the Board make it a policy that where possible, contracts be made directly with the actual manufacturers, and not through agencies or brokers. In cases where contracts have been made through agents or brokers, the name of the company or agent should appear on the contract.

Prices.—A proposed letter to the Quartermaster General was read by the Chairman, which letter dealt with the fuel situation on the Pacific Coast and was in response to an inquiry of the Quartermaster General of May 12th, requesting advices as to bids recently received.

The proposed letter was approved and the decision regarding taxation was adopted as a basis of policy of the General Munitions Board.

Cantonments.—Mr. Olmsted of the Emergency Construction Committee was invited into the meeting, who stated that the estimated cost of cantonments from the data now on hand showed that the total cost would probably be more than double the original estimated cost, being instead of $60,000,000 probably $160,000,000.

In view of the fact that the proposed appropriation was for only $60,000,000, the Chairman suggested that he advise the Secretary of War as to this matter and that a conference with the Secretary of War and Mr. Fitzgerald be arranged with the Committee on Emergency Construction, which was dealing with the cantonment question.

236 *Committees of the Emergency Construction Committee.*—A letter was presented from this Committee with recommendations as to forming new committees for conferences as to cantonments.

The general character of the committee proposed was approved, but it was decided that the policy of the Board should be to have committee memberships made up of manufacturers and producers and not jobbers or consumers of the products in question.

Clearance—Khaki Duck for Gas Masks.—A memorandum was presented from the Committee on Supplies, asking that authority be given the Rock Island Arsenal to deliver a quantity of khaki duck to the Simmons Hardware Company for use in the manufacture of bags to contain gas masks.

Such action was approved.

Army Requirements—Motor Transport.—The correspondence relative to the specifications recently sent out by the Quartermaster Department inviting bids on motor vehicles was presented to the Board and a general discussion took place, during which it was shown that different branches of the Transport Service should use different types of trucks, instead of trying to standardize all trucks to be used for army transport purposes, this being necessitated largely by the fact that the production of the types specified was represented as much less than the amount actually required.

237 The question of motor transport was referred to Mr. Coffin with a request that he make a recommendation to the Board as to the best way to handle the matter.

Clearance.—Paymaster Hancock presented a memorandum requesting clearance of 200,000 yards of slate cotton drill. Clearance on this was granted and the buying of material approved.

Optical glass.—Dr. Millikan reported that after a conference with Mr. Summers regarding the increased facilities for producing optical glass at plants at present engaged in this business, it had been decided to request an appropriation of $200,000 for this purpose.

The Chairman suggested that Dr. Millikan and Dr. Stratton confer with the Chief of Ordnance of the Army, and the Chief of the Bureau of Ordnance, Navy, on this subject, in which both Departments were vitally interested.

The meeting adjourned at 11:45 a. m. o'clock.

L. N. HINE, *Acting Secretary.*
(approved) CHESTER C. BOLTON, *Secretary.*

238 **Minutes of Meeting of Executive Committee of the General Munitions Board held Monday, May 27, 1917, at 8:30 a. m., in the Munsey Building**

Present: General Aleshire; Colonel Blunt; Colonel Hodgson; Major Pierce; Paymaster Hancock; Dr. Simpson; Mr. Rosenwald; Mr. Meyer; Major Pierce, Presiding; Mr. Bolton, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Priority—French 75 m/m Jackets.—The Secretary reported Memorandum received from the Committee on Army & Navy Artillery, advising that it was not advisable to make any change in the priority of munitions now under contract with the Bethlehem Steel Company. This memorandum was in response to a request for a report from this committee in connection with communication addressed to the Munitions Board by the French Purchasing Commission, under date of May 19th.

Legislation affecting Munitions manufacture.—A memorandum was presented from the counsel of the General Munitions Board in response to an inquiry addressed to the Legal Department, under date of May 23rd, regarding pending legislation before the West Virginia legislature, reporting in substance that the proposed legislation would be unconstitutional in that it interfered with interstate commerce. The counsel suggested, however, that the Munitions Board should voice a protest to the government and legislature of West Virginia, urging the defeat of the proposed legislation
239 as the manufacturers might be caused some embarrassment in case the legislation were enacted, and prior to its being found invalid. It was recommended that such a suggestion be made by the Munitions Board to the Council of National Defense, which action was ordered.

Army requirements—Aluminum.—Memorandum was presented from the Committee on Raw Materials, advising that arrangements had been made whereby Aluminum could be supplied in any quan-

ities to the Quartermaster's Department for aluminum tent pins if such action was necessary, the Memorandum being in response to request for report on this subject pursuant to Board action of May 17th. Copy of this report was ordered referred to the Quartermaster General.

Army Requirements—Copper.—Report was presented from the New Materials Committee with reference to the requirements of copper by the Signal Corps, advising that 300,000 pounds of copper wire originally provided for the Signal Corps in the total of 45,000,000 pounds for the Army & Navy Corps, and further advising that no communication from the General staff indicating the amounts of copper required by the Signal Corps had been received, and suggesting that the requirements of the various departments of the army, excepting the Ordnance Department, be transmitted to the Raw Materials Committee at the earliest date possible. The Secretary was requested to learn the requirements of the Engineer, Medical, and Quartermaster Departments and report such requirements to the Raw Materials committee.

Raw Material—TNT.—Memorandum from the Raw Materials Committee was received, advising that there is a shortage of TNT and that it will be very difficult to meet requirements if present specifications are adhered to. This report came in response to a request which the Munitions Board made to the Raw Materials Committee under date of May 23rd. The report further called
240 attention to the fact that the Army & Navy had personally reported they felt no concern over the supply of TNT. The Secretary was requested to send a copy of this report to both the Ordnance Department and the Bureau of Ordnance, asking for a report on this subject from both departments with a view of determining whether or not it is essential that this commodity be added to the list of items on which Clearance must be asked of the Board.

Army Requirements—Rifle & Pistol Ammunition.—A copy of a letter addressed to General Crozier, under date of May 24th with reference to the negotiations had with manufacturers of pistol and rifle cartridges and advising as fair and just the price proposed for 81,000,000 rounds of pistol cartridges and 1,320,000,000 of rifle ball cartridges. These copies should have been submitted in connection with Colonel Blunt's report on this subject, as shown in the minutes under date of May 24th. The letters as submitted were approved.

Prices.—Memorandum from the Ordnance Department submitting copies of all order which had been placed by that office for cotton goods other than those accompanying the letter from the Ordnance Department, under date of May 12th, were submitted with a request that the Munitions Board confirm the prices mentioned therein. This matter was also referred to the Committee on Supplies for report.

Cantonments.—Memorandum was presented from Mr. Starrett of the Committee on Emergency Construction, endorsing the request from Colonel Littell, asking that an advance of funds amounting to $30,000 be secured for the purpose of cantonment construction, as the funds of the regular appropriations cannot be used under the law for

some of the various propositions in the construction of cantonments, and as this amount will be necessary during the next two weeks. This recommendation was approved and ordered transmitted to the Council of National Defense for their attention.

241 *Cantonment Accountants.*—Memorandum was presented from Committee on Emergency Construction, calling attention to the forms and the uses of the Auditor of The War Department, and suggesting cooperation between the Auditor's Department and civil accountants who are being called together to act as division accountants in the Cantonment work. It was suggested that this matter be referred back to Mr. Starret's Committee with the request that that Committee confer with the Auditor with a view to learning whether action as recommended by that committee can be done legally and reporting the outcome of this conference to the Board.

Army Requirements—Wagons.—A communication from the Engineer Corps was presented, calling attention to certain prices quoted by wagon manufacturers on requirements of the Engineer Corps and requesting information as to what action, if any, could be taken to secure more satisfactory prices. This matter was ordered referred to the Committee of the General Munitions Board on Army Vehicles, with a request that that Committee convene and discuss the matter with the Engineer Corps together with Colonel Baker and report result of the conference to the Board.

Munition Manufacturers.—Memorandum was presented from the Ordnance Department, calling attention to the desire of the Ludey & Taylor Company to manufacture munition parts. This matter was referred to the Secretary for attention.

Army Requirements—Copper & Spelter.—Memorandum was presented by Colonel Blunt, outlining the amount of Copper and Spelter required by the companies manufacturing rifle ball cartridges for this Government under the contracts recently suggested by the Munitions Board, the prices of which contracts had been based partly upon the prices arranged for by the Raw Materials Committee

242 for Copper. Colonel Blunt pointed out that the large part of that copper had been allotted in other contracts of the Ordnance Department, but that it was desired to allot the amounts of copper and zinc called for in the small-arms ammunition contracts from the original commitments made to the Ordnance Department, and endeavor to have further lots of copper at advantageous prices obtained for the Ordnance Department against which tonnage the other contracts of the Ordnance Department made prior to the small-arms ammunition contracts and reported above, could be placed. This matter was referred to the Raw Materials Committee for attention and report.

Priority.—A letter was presented by General Aleshire received from the Fort Pitt Bridge Works, requesting in a general way aid on delivery of steel. This matter was discussed at some length and it was suggested to General Aleshire that he learn the definite requirements of the Fort Pitt Bridge Works and the use for which this steel was intended before taking any definite action in the matter.

The meeting adjourned at 9:30 A. M.

CHESTER C. BOLTON, *Secretary.*

243 Minutes of Meeting of the General Munitions Board held Tuesday, May 29, at 11 a. m., in Room 934 of the Munsey Building

Present: Admiral Zane; Admiral Rousseau; Commander Kearney; General Cruse; Colonel Blunt; Colonel Fisher; Major Kelly; Lieut. Col. Lemly; Mr. Meyer; Dr. Simpson; Mr. Scott; Mr. Crowell; Dr. Milliken; Mr. Starrett; Admiral Capps; Commander Leigh; Paymaster Hancock; Col. Hogson; Col. Dunn; Major Weber; Major Wallace; Major Pierce; Mr. Rogers; Dr. Martin; Mr. Howell; Mr. Rosenwald; Mr. Coffin; Mr. Bolton, Secretary; Mr. F. A. Scott, Presiding.

The reading of the minutes of the previous meeting was dispensed with.

Hour of Meeting.—The Chairman suggested that it might be more convenient for all concerned to change the hour of the regular weekly meeting, and after some discussion it was decided that the general meetings of the General Munitions Board should be held at 11:00 A. M. The Secretary was requested to notify each member accordingly.

Priority—Committee Membership.—The Chairman presented a report from General Aleshire, Chairman of the Priority Committee, advising relative to the duties of that committee and the members who had been added being representatives from the Department of Agriculture, Department of Commerce, and the Department of Interior. The Chairman was advised that the Navy had nominated Admiral Mason as one of the representatives of the Navy on the Priority Committee, and that another would be designated in the near future. It was further recommended that the Chair-

244 man of the Federal Trade Commission name a member of that commission to act as a member of the Priority Committee, and such action was ordered recommended to the Chairman of the Federal Trade Commission.

Forgings.—A communication was presented from Admiral Earle calling attention to the fact that the requirements of the Navy would necessitate approximately 10,000,00 pounds of gun forgings, and under arrangements made with the Bethlehem Steel Company and the Midvale Steel Company only 6,000,000 pounds had been ordered for the navy. Mr. Crowell of the Artillery Committee stated that that committee had been having negotiations with the Tindel Morris Company, endeavoring to increase the capacity of that company to 5,000,000 pounds of forgings, and were ready to recommend the awarding of contracts to that company by the Ordnance Department for that amount. It was further stated that the Artillery Committee were negotiating with the Crucible Steel Company and the Standard Steel Company on 5,000,000 pounds of forgings each, and hoped to be in position to arrange for contracts with those companies for that tonnage by the end of the week, giving an output of 25,000,000 pounds forgings by the 1st of July 1918. Mr. Crowell pointed out that all the negotiations for forgings had been made on a six months basis, so that by July 1st, 1918, this would mean a double capacity or 50,000,000 pounds per annum. The request

of Admiral Earle regarding the additional facilities for forging was referred to Mr. Crowell for attention and report.

Priority.—The matter of priority was discussed at some length, and it was decided with reference to the general duties of the Priority Committee, that:

The Priority Committee should proceed in its decisions in accordance with the schedule of priority as announced, first, by the Cabinet officers, and second, by the various departments, establishing from the various departments what is the necessity for the priority.

245 *Cantonments.*—Major Pierce reported with reference to recent developments in the Cantonment situation, advising that the plan for 16 cantonments instead of 32 to be ready by the first of September had been approved; that a large part of the available fund of $77,000,000 for this work of construction had already been contracted for, and that additional funds would be necessary; that the Secretary of War, however, had ordered the work to proceed, and that if funds were not available a deficiency appropriation would probably be necessitated.

Major Pierce reported the National Guard will be called about the first of July to be mobilized in 16 divisional camps, the troops to be sheltered by tentage which the Quartermaster now has and which will be ready by the first of August; that the regular army, increased to 300,000 men, would be sheltered at enlarged army posts; that the Cantonments mentioned above would provide shelter for an additional 500,000 men by the first of September, both the above number of men being in addition to the National Guard divisional camps mentioned above. Mr. Starrett advised that Colonel Littell was awaiting the decision as to how many cantonments were to be built and the location of these cantonments before proceeding with his work, and that the machinery for his work had been arranged; further, that a sectional inventory of contractors was being made with the thought that each section would supply its own contractors.

Follow-up System.—The Chairman presented a memorandum suggesting the organization of a Follow-up department, and after some discussion, during which it was shown that each department preferred to do its own follow-up work, the following motion, having been offered by Major Pierce and seconded by Major Wallace, was carried and copy of same sent to each department for comment:

Resolved, That the General Munitions Board hold itself in readiness to co-operate with all departments in follow-up work when requested to do so
246 by Department, but the General Munitions Board will not hold itself responsible for initiating such follow-up.

Contracts—Surgical Dressings.—A memorandum from the Legal Department of the General Munitions Board was presented, transmitting a proposed form of contract for surgical dressings, which contracts, while drawn in the light of precise conditions, conformed to the principles laid down by the General Munitions Board. This form of contract having been approved by the Comptroller of the Treasury, the Judge Advocate General's Department, the Medical section, and the Medical Department of the Army, was approved upon motion properly made and seconded by the General Munitions Board. The Secretary was requested to send a copy of this contract to all members of the Board, together with a copy of the Accountants Committee of the Munitions Board, which had been submitted in connection with the contract.

Recommendations—Investigation of Noxious Gases.—A recommendation from the National Research Council was presented by that Committee for the investigation of problems connected with the use of noxious gases in warfare, suggesting that same be recommended to the Council of National Defense by the Munitions Board. This action was approved and ordered transmitted to the Council of National Defense.

Reports received.—The Secretary presented reports of the activities of the following committees for the past week, namely, the Legal Department, the Priority Committee, the Storage Committee, the Army & Navy Artillery Committee, and also a report of subjects on which delivery had been expedited, all of which reports were ordered received and filed.

Priority.—The subject of priority was again discussed, particularly the responsibility devolving because of cancelling industrial contracts in order to offer production for Government demands. Mr. Meyer was asked to draw up a memorandum on this subject, after having consulted in the matter with the Judge Advocate General's Department.

247 *Raw Materials—Copper.*—Mr. Meyer reported from the Raw Materials Committee that 10,000,000 pounds of copper at reasonable prices had been arranged for in connection with the requirements of the Department of Construction and Repair. Mr. Meyer was requested to send a memorandum to that effect to Admiral Capps, who was in charge of that department.

Shell Steel.—Mr. Meyer reported a communication from the T. A. Gillespie Company to the effect that that company was unable to procure any forgings steel for shells, to be furnished under contracts recently awarded them by the Ordnance Department, at anything like a reasonable price. This matter was referred to Mr. Meyer to counsel with Mr. Bonner, of the Steel Committee, and Colonel Hoffer, and to report to the Board.

Raw Materials—Wool.—Paymaster Hancock presented a memorandum to the Board calling attention to a company which had negotiated for supplying the Navy Department with wool but had later withdrawn its offer. This matter had been referred to the Woolen Committee; and the policy of that company was reported as prompted by a member of the Woolen Committee who was a member of the company involved. This matter was referred to Mr. Rosenwald for investigation and report to the Board.

Clearance.—Paymaster Hancock presented three requests from the Bureau of Supplies and Accounts for clearance on lumber, Nos. 288, 294, 295, from Portsmouth, N. H. Clearance of these requisitions was granted, subject to the approval of the Lumber Committee. Paymaster Hancock also presented requisition No. 544 of the Bureau of Steam Engineering on a crank shaft, which clearance was approved.

The meeting adjourned at 12:45.

CHESTER C. BOLTON, *Secretary.*

248 **Minutes of Meeting of the Executive Committee of the General Munitions Board held at 8: 30 a. m., Wednesday, May 30, in Munsey Building**

Present: Col. Blunt; Major Pierce; Paymaster Hancock; Mr. Rosenwald; Mr. Scott, Presiding; Mr. Bolton, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Machine guns.—A communication from the Marlin Arms Company was presented to the Board discrediting the letter written to the Board under date of May 23rd offering to manufacture the Browning water-cooled machine gun. In view of this, the proposition of the Marlin people was considered void and the Secretary requested to advise Mr. Hanson of the Machine Gun Committee accordingly.

Storage.—A communication from Mr. Cook, of the Storage Committee, was presented advising the status of that committee and calling attention to the fact that representatives of the Quartermaster's Deparment or Signal Corps had not been designated to act with that committee, although request for such action had been made some time ago. The communication further outlined the primary duties of that committee, being, first, to consider the types of storehouses for subdepots, with facilities and transportation; and, second, the personnel, which included rules and regulations for administration. This matter was referred to Major Pierce for attention.

Purchasing Committee.—A telegram from Mr. Otterson was presented requesting that a government officer be designated to it, the Purchasing Bureau, and also that a letter of approval of the
249 idea of the Purchasing Committee be sent, either from the Government or from the Munitions Board. This matter was referred to Colonel Blunt for attention.

Food.—Discussion took place relative to the food situation and particularly to the Quartermaster's attitude regarding the canning production and the purchase of necessary supplies. The attitude of the Quartermaster's Department, having this matter in charge, was discussed and Mr. Rosenwald was requested to Mr. Heyl of the Canners' Association draw up a memorandum on this subject for further consideration by the Board.

Priority—Request for delivery on Steel.—Memorandum was presented from the Council of National Defense relative to a request from the Council of Defense of the state of Utah, asking the head of the Council for the delivery of plates from the Carnegie Steel Company, and calling attention to the great necessity of having this material delivered very promptly for the good of the state and indirectly the Government. Report from Mr. Bonner of the Steel Committee was also presented, showing the impossibility of the Carnegie Steel Company making prompt delivery of this material, without interference of Government or cargo ship schedule. After some discusison it was decided to learn from the Committee of Defense of Utah whether that committee had exhausted all sources or supply for material before making their request, and it was also suggested that Mr. Bonner be requested to advise the proportion of industrial tonnage still being furnished by the steel industry.

Raw Material—Lumber.—Letter was presented from Congressman Oliver regarding the lumber situation and the material necessary for Cantonments. A report was also presented from the Raw Materials Committee as to the lumber situation on the west coast, and reporting as to price, which matter had been referred to the Raw Materials Committee by the General Munitions Board.

The report of the Raw Materials Committee was ordered
250 returned to that committee with a request for more definite and specific information on the price situation.

Cantonments.—The cantonment situation was discussed at length, and also the forms of contract to be used in connection with that work. A rough draft of this contract was presented and the rate of compensation discussed at some length. No action was taken, but it was decided to go into this matter more fully at tomorrow's meeting.

The meeting adjourned at 10: 30 A. M.

CHESTER C. BOLTON, *Secretary.*

251 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Thursday, May 31, 1917, at 8: 30 a. m., in the Munsey Building**

There were present: Colonel Hodgson; Colonel Blunt; Major Pierce; General Aleshire; Paymaster Hancock; Mr. Summers; Mr. Meyer; Mr. Rosenwald; Mr. Scott, presiding; and Mr. Bolton, secretary.

The reading of the minutes of the previous meeting was dispensed with.

Control of Cancellations.—A number of instances have come to the attention of the Board showing a tendency on the part of some manufacturing plants to arbitrarily cancel delivery to private individuals or corporations, stating their cancellation is based on the fact that the Government requires all or a part of their output.

Priority.—General Aleshire referred to the question of a certain tonnage of steel plates for one of the large power companies of Utah, calling attention to the important position occupied by this company as it furnished power for several of the larger copper companies.

Mr. Farrel informed General Aleshire that these plates could not be delivered without interferring with the Government schedule. It was moved by Major Pierce that General Aleshire be instructed to get in touch with the Federal Trade Commission with the
252 idea of having a member of the Trade Commission become a member of the Priority Board.

General Aleshire asked for more definite information concerning the cancellations before proceeding further.

Control of Cancellations.—It has occurred that various manufacturers disposed to be unfair and to take advantage of the situation whereby they might receive a higher price for their products are inclined to cancel contracts on the grounds that the Government requires a certain part or all of their output. It was decided that a publicity campaign should be begun immediately in order to bring before the American manufacturers the fact that any cancellations arbitrarily made will be investigated by the Government.

The Chair requested General Aleshire to work out a program and submit it for approval.

Cantonments.—The Chairman read a telegram from the Westinghouse, Church, Kerr Company, over the signature of their Mr. Boyd, regarding the delay in placing contracts for cantonments. It was stated in this telegram that in his (Mr. Boyd's) opinion more prompt action would be had if the contracts were let by departmental commanders.

In view of the fact that Mr. Boyd was consulted and had a hand in deciding on the method of placing contracts, this change of opinion on his part is evidently due to selfish motives. It was decided to investigate this further as no doubt Mr. Boyd has sent the same telegram to certain members of the House or Senate, and all appreciated the fact that movements of this kind must be stopped in the beginning.

253 *Contract for Machining Guns.*—The following letters dated May 28th, from the Committee on Army and Navy Artillery were read and approved:

(1) It was recommended that an order be placed with the Gisholt Machine Company for machining 500—4.7″ guns.

(2) It was also recommended that a contract be placed with the American Radiator Company for the manufacture of from 500 to 1,000 3″ Mark VI., 50-calibre guns.

Gun Forging Contracts.—The following letters from the Committee on Army and Navy Artillery were read and approved: Recommending that—

Contract for five million pounds of gun forging be placed with the Bethlehem Steel Corporation and the Midvale Steel and Ordnance Company; also five million pounds 3″ forgings be placed with the Tindel Morris Company, Eddystone, Pa.

Canned-Goods Requirements.—Mr. Rosenwald read a letter addressed to the Quartermaster's Department, outlining a plan of procedure to check up requirements of canned goods and for placing of orders for the same. This letter was approved by the Board.

Report of Committee on Emergency Construction.—The form of contract and the method of procedure for construction of cantonments was discussed at length, with a net result that the Committee was requested to submit a brief, condensed report at the next meeting, to be held tomorrow morning at 8:30 a. m.

Some of the more important points brought out in the discussion were:

(*a*) A careful study of the building capacity of the country should be made. Care should be taken in placing contracts not to allow
254 the various contractors to overload. It is feared that in their eagerness various contractors may agree to do a great deal more work than it is physically possible for them to do.

(*b*) Careful study should be given the labor question and some program worked out whereby the various contractors will not have to bid up labor to the point where various manufacturing plants of the country will be seriously affected.

(*c*) The question of insurance to protect the contractor was discussed at length and Mr. Bulkley was requested to follow this up. There was no decision reached as to whether it was thought advisable for the Government to take the risk or the contractor.

(*d*) It was suggested that the conditions stipulated in a contract covering replacements should be revised and that contractors should not be allowed the full 7% in replacement costs.

(*e*) Mr. Starrett's letter, dated May 30th, regarding the prompt payment for building and engineering construction was read. This is to be followed up with the purpose of working out some definite plan whereby prompt payment will be made to contractors so that finances can be arranged in order not to delay the work.

(*f*) It was agreed that the same form or statement for auditing should be adopted so that the comparisons of costs can be more readily arrived at.

At the close of today's discussion on the matter of cantonments, the Chair asked the Committee to submit at tomorrow's meeting a condensed report, and suggested that Mr. Coffin, Mr. Summers, and Dr. Martin be asked to be present.

Report regarding progress of work at Eddystone.—Colonel Blunt advised that this matter has been discussed with the Secretary and provisions have been made whereby contracts placed with the above company will not be held up.

255 *Speculation in Food Products.*—A letter from Mr. E. T. Meredith, publisher of the "Successful Farming", Des Moines, Iowa, regarding the above subject, was referred to Mr. Hoover.

The meeting adjourned at 11:25 a. m. o'clock.

CHESTER C. BOLTON, *Secretary.*

256 Minutes of Meeting of the Executive Committee of the General Munitions Board held on Friday, June 1, 1917, at 8:30 a. m., in the Munsey Building

There were present: General Aleshire; Colonel Hodgson; Colonel Littell; Colonel Blunt; Major Pierce; Paymaster Hancock; Mr. Coffin; Mr. Summers; Dr. Show; Dr. Bulkley; Mr. Sager; Members of the Committee on Special Building; Mr. F. A. Scott, presiding; and Mr. H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Labor.—A letter from Mr. Gompers was read. In this communication it was stated that the Wagner Electric Company and others were employing nonunion men and that while the Union had no intention of calling a strike on this account, this action on the part of these companies had a tendency to retard the speed of construction, which matter was referred to Mr. Coffin and Mr. Gompers.

Mr. Coffin later advised that the Civil Service Commission was the logical organization to look after this question.

The matter was referred to Colonel Littell for recommendation.

Prices—Bids for Fuel Oil for Springfield Armory.—Col. Blunt called attention to the above bids. This matter was referred to the Committee on Raw Materials.

Labor Conditions in Indianapolis.—Mr. Pease of the Link Belt Company came before the meeting and called attention to the
257 conditions that have arisen in Indianapolis resulting from the fact that contractors doing Government work at that point are paying more than the prevailing rate for labor in that district. He

stated that a great many of their men had walked out without giving any notice whatever.

Mr. Scott advised that it was the intention of the Board to take up the question of labor with manufacturers' associations or Chambers of Commerce in the district where cantonments were to be built, this question to be taken up several weeks before the actual construction begins.

Committees on Various Classes of Materials Going Into the Construction of Cantonments.—The Chair instructed Mr. Starrett to make up his list of committees, giving the personnel of each committee, and to submit this list to the Board for approval.

Determining of Contracting Firms Best Equipped to Build Cantonments.—It was moved by Colonel Hodgson and seconded by Colonel Pierce, that the General Munitions Board submit to Colonel Littell a list of contracting firms whose organization and equipment are such that they could proceed expeditiously with the construction of cantonments. From this list Colonel Littell is to choose the contractors to whom contracts are to be awarded.

The Chair instructed Mr. Starrett to make up this list at once in order that Colonel Littell might go ahead with the construction of the three cantonments, sites for which had been decided upon.

258 *Publicity Campaign.*—At the suggestion of Mr. Coffin, the Chairman advised that a publicity campaign to guard against adverse public opinion was to be begun immediately. It was suggested that Major McArthur, Capt. Marshall, and Major Preston Brown be appointed members of this committee. The Chair advised that all information would have to come through Mr. Creel, Chairman of the Committee on Public Information, and that he would take this matter up with Mr. Clarkson.

Uniform Method of Placing Contracts.—A letter from the Committee on Emergency Construction was read bearing on this subject. The Chair instructed Mr. Starrett to follow up this matter.

Shipments of Material Entering into Construction of Cantonments.—A letter from the Committee on Emergency Construction, under date of May 28th, was read and the recommendation therein approved by the Board that all shipments of material entering into the construction of cantonments should be made on commercial instead of government bills of lading.

Total Compensation.—As a matter of record, Mr. Rosenwald's original motion, seconded by Mr. Coffin, was:

> That all contracts amounting to over $500,000, full compensation to contractors shall be 7% of cost, but in no event shall the amount of full compensation exceed $200,000.

After some discussion, Mr. Rosenwald moved that his original motion be revised to read as follows:

> That all contracts amounting to $3,000,000 or over, full compensation shall be 6% of cost, but in no event shall full

259 (Missing.) (Not in original.)

260 (*b*) Insurance: It was moved by Mr. Summers and seconded by Colonel Blunt, that the Chair instruct Mr. Bulkely to redraft the clause covering insurance. Mr. Bulkely was requested to consult with the Secretary of War before writing this redraft into the contract.

It was agreed that Mr. Bulkely's draft would be satisfactory to the Board. The form of contract as submitted was approved.

Army Requirements—Contract for more 3″ Field Guns and Carriages.—A letter from the Committee on Army and Navy Artillery, dated June 1, 1917, addressed to the Chief of Ordnance, was presented, recommending the placing of contracts for 1,000, more or less, 3″ field guns and from 500 to 1,000 3″ field gun carriages with the F. H. Symington Co., Baltimore, Md.

This letter was approved and forwarded to the Chief of Ordnance.

Contract for 3″ Gun Carriages.—A letter from the Committee on Army and Navy Artillery, addressed to the Chief of Ordnance, under date of June 1st, 1917, was read recommending that a contract be placed with the New York Air Brake Company for about 400 3″ field gun carriages. This letter was approved and forwarded to the Chief of Ordnance.

The meeting adjourned at 11:25 a. m.

H. P. Ingels, *Acting Secretary.*

261 Minutes of Meeting of the General Munitions Board held Saturday, June 2, 1917, at 11 a. m., in the Munsey Building

Present: Admiral Zane, Admiral McGowan, Admiral Rousseau, Admiral Capps, Admiral Mason, General Cruse, General Aleshire, Colonel Dunn, Colonel Fisher, Colonel Blunt, Colonel Hodgson, Mr. Scott, Major Pierce, Major Wallace, Major Kelley, Paymaster Hancock, Commander Kearney, Commander Leigh, Mr. S. M. Vauclain, Mr. L. L. Summers, Mr. Howard Coffin, Mr. Rosenwald, Mr. Starrett, Mr. Meyer; Mr. Scott, presiding; and Mr. H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Optical Glass.—Regarding the method of equipping the Pittsburgh Plate Glass Company, a letter under date of May 29th, from the Secretary of War, was read. Mr. Scott's reply to this letter, dated June 2nd, was read and approved and was sent to the Bureau of Standards.

Army and Navy Artillery (As Affected by Existing Laws Regulating Hours of Labor on Government Work).—Mr. Vauclain read a letter dated June 1st from the Committee on Army and Navy Artillery, to the effect that it will be practically impossible to get some of the larger manufacturing plants of the country to undertake government work unless they are assured that the present status quo as to hours of labor now existing in various manufacturing establishments will not be changed.

262 After some discussion, a committee consisting of Paymaster Hancock, Admiral Capps, and Mr. Vauclain was appointed to redraft this letter.

The letter as revised, under date of June 1st, was approved and sent to the Advisory Commission of the Council of National Defense.

Progress on Contracts (Following up Work).—A letter under date of May 31st, over the signature of Lt. Col. R. W. Dunn, was read. It was moved by Admiral Rousseau and seconded by Colonel Fisher

that the chair appoint a committee to prepare a program for effectively following up the work on various contracts.

The following committee was appointed and requested to report back to the Board: Colonel Dunn, Paymaster Hancock, and Mr. Summers.

Prices (Percentage of Profit to be Paid Difference Classes of Industries).—Chairman Scott advised the Board that the Chamber of Commerce of the United States had nominated a committee to determine the proper percentage of profit to be paid to different industries and that this body would also nominate four men for membership on the Priority Board.

Deliveries of Materials.—Mr. Summers referred to two letters from contractors, explaining that they were not able to get deliveries on certain necessary materials. Mr. Summers called especial attention to the option for steel held by certain manufacturers proposing to make shells for the Government. In these particular cases the Steel Company had notified the manufacturer that unless options were exercised within twenty-four or forty-eight hours they would be cancelled. This condition was brought before the Board by Mr. Summers to convey the seriousness of the situation, and he stated that he believed that the necessary steps will have to be taken
263 in order to secure proper tonnage of steel for certain Government contracts.

Colt Automatic Pistols.—Mr. Scott read his letter of June 2nd, addressed to the Chief of Ordnance, regarding the proposition submitted by the Colt's Patent Fire Arms Manufacturing Company, and recommended that their proposition to furnish 500,000 automatic pistols be accepted.

It was moved by Commander Kearney and seconded by Paymaster Hancock that this letter be approved.

Lack of Funds necessary for Quartermaster General to Meet Obligations.—A letter from Mr. Chas. Eisenman, dated May 29th, was read. General Cruse supplemented this letter by advising the Board as to the embarrassing position he was being put in by not being able to meet current obligations. The chair advised that immediate action would be taken to clear up this situation.

Shipping (Lack of Bottoms for Shipments to Russia).—A letter from the President of the Eddystone Ammunition Corporation, under date of May 25th, was read. At least for the time being the Chair advised that all matters pertaining to questions of shipping would be referred to Admiral Rousseau.

Beds (Fair Prices to be Paid).—Colonel Fisher stated that orders were to be placed for 85,000 beds, and called attention to the fact that the prices quoted by the eastern manufacturers were somewhat higher than those of others, and that the difference was largely due to the question of proper overhead charges.

Colonel Fisher was requested to take this matter up with the Accountancy Committee.

Webbing—Dispatch Cases.—The Ordnance Department, in accordance with a letter dated May 29th, over the signature of
264 Capt. A. W. Maish, requested confirmation of prices covering webbing and dispatch cases ordered during the week ending May 26th, 1917. These were approved by Mr. Rosenwald and confirmed by the Board.

Movable Kitchens.—At the request of Colonel Hodgson, orders for 25 movable kitchens were approved.

Prices—Radio Equipment.—At the request of Commander R. H. Leigh, the Committee on Accountancy was requested to confer with the representative of the Bureau of Steam Engineering in order to determine a fair price for radio equipment.

The meeting adjourned at 12:45 p. m.

H. P. Ingels, *Acting Secretary.*

265 Minutes of General Meeting of the General Munitions Board held Tuesday, June 5, 1917, at 11 a. m., in the Munsey Building

Present: Admiral Capps; Admiral Mason; Admiral Zane; Admiral Rousseau; General Cruse; General Aleshire; Colonel Hodgson; Colonel Dunn; Colonel Blunt; Colonel Lemly; Colonel Fisher; Major Pierce; Major Kelley; Major Wallace; Major Simpson; Paymaster Hancock; Commander Kearney; Commander Leigh; Mr. Summers; Mr. Van Dervoort; Mr. Starrett; Mr. Rosenwald; Dr. Holcomb; Mr. Howe; Mr. Rogers; Dr. Simpson; Mr. Scott; Mr. Bolton; Mr. Scott, presiding; and Mr. H. P. Ingels, acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

French and British Scientific Missions.—The Chair announced that there would be a joint meeting with the members of the French and British Scientific Mission and the General Munitions Board to be held in the anteroom of the office of the Secretary of War on Thursday, June 7th, at 9 a. m.

It was moved by Admiral Capps and seconded by Major Pierce that invitations to attend this meeting be sent to the Secretary of War and the Secretary of Navy, stating that the above mission will outline the methods adopted for handling the submarine problem; this invitation to include such officers of their respective departments whose duties are in connection with this work.

266 Major Pierce and Paymaster Hancock were requested to draft a formal invitation.

Hopkins & Allen Arms Co.—A memorandum of June 4th, referring to the contract that this company has with the Belgian Government for the manufacture of rifles was discussed, also the desire on the part of the Hopkins & Allen Arms Company to manufacture Springfield rifles.

The Board was advised that this company had requested Mr. S. M. Vauclain to act in an advisory capacity in order to help them to straighten out some of their difficulties.

It was the consensus of opinion that the management and equipment of this company is such as not to warrant the placing of orders for Springfield rifles with them.

This matter was referred to Mr. Vauclain for further advice.

Cantonments (Letter from Mr. Rhett, President of the U. S. Chamber of Commerce, regarding the method of placing contracts).—This letter was referred to Mr. Starrett with the request that he draft an answer and submit it to the Board for approval.

Fore River Shipbuilding Company.—A letter under date of May 26th addressed to Mr. Howard Coffin, was read, and in this letter

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particular attention was called to the so-called "red tape" and the number of signatures necessary in order to get documents approved.

After some discussion by Admiral Capps, it was agreed that this letter would be treated unofficially.

Cantonments (Report of the accountancy Committee on Field Work).—This question was referred to Mr. Bulkley with the understanding that before he proceeds toward having the law
267 amended to permit the accountants to leave Washington, that he have the council of National Defense endorse the plan for field accountants.

Colt Patent Fire Arms Corporation.—A letter dated June 5th, recommending that an order be placed with the above company for 100,000 Colt's revolvers, calibre .45, was approved and handed to Colonel Blunt for his attention.

Smith & Wesson.—A letter dated June 5th, from Mr. Scott addressed to the Chief of Ordnance, recommending that an order be placed with the above company for 100,000 Smith & Wesson revolvers, calibre .45, was approved and handed to Colonel Blunt for his attention.

Artillery Vehicles.—A letter from the War Department, dated June 4th, listing artillery vehicles as covered by a tender from the American Car & Foundry Company. After carefully considering the prices and deliveries this proposition was referred to the Committee on Army and Navy Artillery for approval.

Military Instruments.—A communication from the Ordnance Department was submitted relative to a proposed arrangement with the Warner & Swasey Company of Cleveland, covering the manufacture of 3,000 panoramic sites for the use of the field artillery.

Chairman Scott retired and Colonel Blunt presided.

Colonel Blunt stated that this Company had agreed to undertake work only after considerable pressure from the Ordnance Department.

It was moved by Mr. Rosenwald and seconded by General Aleshire, that the price of $300 being fair and just, the proposition would be approved, and it was recommended that orders be placed.

268 *Raw Materials—Steel.*—Mr. Summers discussed the proper price to be paid for steel, and gave various reasons why orders should not be closed at the present moment.

Mr. Summers was requested to give this subject further consideration and report at a later meeting.

Automobile Trucks.—Mr. Zimmerscheid, Chairman of the Automotive Committee, being unable to attend the meeting, action was deferred.

The meeting adjourned at 12:15 p. m. o'clock.

H. P. Ingels, *Acting Secretary.*

269 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Wednesday, June 6, 1917, at 8:30 a. m., in the Munsey Building**

Present: General Aleshire; Colonel Hodgson; Colonel Blunt; Major Pierce; Paymaster Hancock; Mr. Summers; Mr. Rosenwald; Mr. Bolton; Dr. Simpson; Mr. Scott; Mr. F. A. Scott, presiding; and Mr. H. P. Ingels, acting secretary.

The reading of the minutes of the previous meeting was dispensed with.

Navy Requirements—Machining Guns.—Reference was made to conference held by representative of the American Radiator Co. with certain officials of the Navy Department. At this conference he was advised that the American Radiator Company could not hope to receive contracts for machining guns on the cost-plus-percentage basis.

This being contrary to the real fact of the case, the Chair advised that he would investigate the matter.

Raw Materials—Coal—Request from the Rock Island Arsenal to Clear 6,000 Tons of Coal.—It was decided for the time being that coal would be stricken from the list of materials to be cleared through the Munitions Board; the Secretary of War and the Secretary of the Navy to be advised accordingly. This matter was referred to the Coal Committee.

270 *Priority—Requests from Manufacturers.*—It was moved by Mr. Summers and seconded by General Aleshire that it might be well, in view of the fact that the Board is not authorized to determine the priority of civil requirements, to have a tabulated list made of all requests received from manufacturers or otherwise, for aid in securing materials over which this Board has no control, and this list held in readiness for future use. This matter was referred to the Priority Committee.

Medical Supplies—A Memorandum dated June 5th from Dr. F. F. Simpson, requesting at least 500 beds.—These were cleared.

Raw Material—Steel for Signal Corps.—A memorandum of June 5th, requesting clearance on 108,000 lbs. of steel for use in making tool boxes for the Aviation Section of the Signal Corps, was presented. This was cleared.

Medical Supplies—Bath Towels.—A memorandum of June 4th, from Lt. Col. Hartsock, was read, asking that prices be approved for 239,000 bath towels. This matter was referred to Mr. Rosenwald's Committee with power to act.

Medical Supplies.—A memorandum from Lt. Col. Hartsock, dated June 1st, requested appointment of special committees and various classes of supplies needed by the Medical Corps.

A memorandum from Lt. Col. Hartsock, dated June 1st, requested the appointment of a Committee on "Beds and Bedding" was also presented.

271 This matter was referred to Dr. Simpson for attention.

Cantonments—Rates to be paid Labor.—After some discussion as to the regulation of rates to be paid labor for the work on cantonment construction, the Chair suggested that Colonel Littell exercise general supervision of regulation of prices to be paid for labor and that his officer in the field on each cantonment be instructed to advise him (Colonel Littell) whenever it is necessary to pay more than the going rates of that community, and that before actual advances are made action will have to be approved by Colonel Littell.

This was a suggestion, but no action was taken.

It was moved by Mr. Rosenwald and seconded by Mr. Summers that Mr. Rhett, president of the Chamber of Commerce of the United States, be requested to appoint committees of "Local Cooperation" to

work with the contractors and contracting offices on each cantonment job.

Mr. Starrett was requested to so advise Mr. Rhett.

Cantonments—List of Contractors Recommended for Constructing Cantonments.—Mr. Starrett advised that he would submit a list within twenty-four hours.

Cantonments—Change in Specifications Omitting Screens and Affecting Sewerage.—After some discussion on this subject, Dr. Simpson was requested to take this matter up with the proper authorities, with the idea of explaining clearly to them that screens and good sewerage are absolutely essential to insure the health of soldiers, and recommending that screens not be omitted and that adequate sewerage be installed.

272 *Raw Materials—Benzine.*—Referring to advice by General Tozzi, of the Italian Commission, that the Italian Government required 5,000 tons of benzine, this matter was referred to the Raw Materials Committee, with power to act.

Raw Materials—Steel.—Request from the Imperial Munitions Board of Canada asking clearance for 8″ and 9.2″ forgings and for adaptors was referred to Mr. Summers, with power to act.

Exports to Brazil.—A memorandum from the Chief of Ordnance addressed to the Secretary of War under date of May 21st, referred to the Board for recommendations. The General Munitions Board can see no objection to having these shipments go forward or allowing the Brazilian Government to employ qualified superintendent and metallurgical chemists in their projectile plants.

Priority—Transportation.—A letter dated May 28th from the Interstate Commerce Commission, addressed to General Wm. Crozier, regarding the lifting of the embargo on shipments consigned to the Imperial Munitions Board of Ottawa, Canada. It is the opinion of the Board that material consigned to the above Mission should receive the same attention as our own material.

Priority—Material Required for the Construction of Automobile Trucks.—A letter dated May 24th, from the Kelly Springfield Motor Truck Company, Springfield, Ohio, together with tabulated statement showing material required to complete the construction of trucks now on order, was read. The General Munitions Board realizes the need of assistance, but at the present time has no authority.

This matter was referred to General Aleshire for attention.

273 *Cantonments: American Lake (Recommendation of Contractor).*—After some discussion regarding the unusual conditions at Tacoma, viz., the citizens of Tacoma furnishing the site, the banks and newspapers endorsing the Hurley-Mason Company, and the fact that the Secretary of War suggests that, under the circumstances, he hoped that after investigation that the committee could recommend the Hurley-Mason Company, Mr. Rosenwald made the following suggestion:

That the Board go on record stating that if the Emergency Construction Committee could not conscientiously recommend that the contract be awarded to the Hurley-Mason Company, that the responsibility for awarding this contract to the Hurley-Mason Company rests entirely with the Secretary of War and that the General Munitions Board be in no way responsible.

The meeting adjourned at 12:15 a. m.

H. P. Ingels, *Asst. Secretary.*

274 Minutes of Meeting of the Executive Committee of the General Munitions Board held Friday, June 8, 1917, at 8:30 a. m., in the Munsey Building

Present: Colonel Blunt; Colonel Hodgson; Major Pierce; Dr. Simpson; Paymaster Hancock; Mr. F. A. Scott, presiding; and Mr. H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Cantonments.—Mr. Starrett, at the request of Mr. Scott, outlined the general method employed to get the list of competent contractors from which to determine the firms best equipped to handle work. Mr. Starrett was requested to present a report on Tuesday Morning, June 12th, giving full information as to the identity of the various members of the Committee on Emergency Construction.

Mr. Summers recommended that the Board go on record to the effect that the preferred list of contractors suggested for the construction of each cantonment be considered before the final recommending of a single firm to whom contract should be awarded.

In accordance with a memorandum dated June 8th, addressed to Colonel Littell from the General Munitions Board, recom-

275 mendations for the letting of the following contracts were made:

Ayer, Mass.—Fred T. Ley Company.
Wrightstown, N. J.—Irwin & Leighton.
Atlanta (Silver Lake), Ga.—Arthur Tufts.
Columbia, S. C.—Hardaway Contracting Co.

Cantonments—Award of contract for constructing cantonment at American Lake (Tacoma).—Mr. Starrett reported to the Board that the opinion of the Committee on Emergency Construction was that the Grant Smith & Company, of St. Paul, Minn., as well as several other contractors in the northwest, are better equipped to build this cantonment in the three months than the Hurley-Mason Company, of Tacoma, due to the unusual situation at Tacoma, viz., the people have donated the site. Newspapers and chambers of commerce are evidently behind the Hurley-Mason Co., and have so advised the Secretary of War.

Mr. Bulkley was instructed to advise with the Secretary and to report back to the Board before any recommendation is made by the Board as to who shall receive this contract.

Raw Materials—Report of Lumber Committee.—This matter was referred to the Emergency Construction Committee.

Emergency Construction Committee.—It was moved by Mr. Summers that a resolution be passed by the Board thanking the Emergency Construction Committee for the effective work they have done, especially in connection with the placing of contracts for the construction of cantonments. No action.

Prices—Gasoline for Springfield Armory.—Referring to memorandum dated May 31st, addressed to the Chief of Ordnance—gasoline Proposals, the price of the lowest bidder was approved as reasonable.

276 In answer to request in the second paragraph of the above-mentioned memorandum, the Board is not in position at this

time to make any statement regarding the contemplated action of the Government which might tend to force down price of gasoline.

This matter was referred to Colonel Babbitt.

Prices—Cotton Duck for Ordnance Department.—In accordance with memorandum dated June 2nd, from the Ordnance Department, orders for duck as outlined in Capt. Babbitt's letter of May 24th, addressed to the C. E. Riley & Co., were ordered referred to Mr. Eisenman for confirmation, with the request that he report to the Board.

Clearance—Alberton Extra Cotton Duck.—A memorandum was presented from the Signal Corps requesting clearance on 10,200 square yards of Alberton extra cotton duck. This was cleared by the Board.

Guns and Gun Forgings.—A memorandum dated June 5th, addressed to the Secretary of Navy, from the Bureau of Ordnance, Navy Department, referring to the urgent need for executing contracts for 500 3″ guns, 500 4″ guns, and 5,000,000 pounds of gun forgings, was presented. This matter was turned over to the Committee on Army and Navy Artillery.

Clearance—Buckets, Water Cans, Garbage Cans, etc.—The articles tabulated in the memorandum from Colonel Lemly, dated June 6th, addressed to Paymaster Hancock, were cleared.

Prices—Steel Products.—A copy of a letter of June 1st, over the signature of J. A. Farrell, addressed to Mr. Baruch, regarding prices for light rails, portable tracks, wire, nails, etc., was presented and ordered filed.

Copies of this letter were transmitted to Colonel Littell and Paymaster Hancock, asking for remarks, but stating that the
277 Board does not care to make any recommendations regarding the prices.

Raw Materials—Required for the manufacture of 9,000,000 rounds of 3″ ammunition.—This matter was presented to the Board but deferred until the general meeting on Tuesday, June 12th, 1917.

Appointment—Admiral A. V. Zane.—A letter dated June 4th, addressed to the General Munitions Board from Hon. Franklin D. Roosevelt, Acting Secretary of the Navy, was presented requesting that Rear Admiral A. V. Zane be designated as a member of the Priority Committee. This was approved.

Appointment—Major Earl I. Brown.—A letter of June 4th, addressed to Mr. Scott from the Secretary of War, was presented requesting the appointment of Major Earl I. Brown on the General Munitions Board.

This appointment was approved; no action was taken, however, pending the approval by the Council of National Defense.

This matter was referred to Mr. Gifford with a request for action.

Raw Materials—Webbings.—It was recommended by the Board that an order be placed with the Everlasting Company of New York City for webbings, as outlined in a memorandum from the Ordnance Department, dated June 5th, addressed to the Everlasting Company.

Prices—Fuel Oil for Springfield Armory.—Regarding this matter the following action was taken:

The General Munitions Board recommend the prices indicated on the three proposals, dated April 20th, to furnish Fuel Oil for the Springfield Armory, as fair and reasonable.

278 The General Munitions Board concur in the stipulation that any National or State tax which may be imposed on Crude Oil or Fuel Oil shall be added to the contract price.

The meeting adjourned at 11:50 A. M.

H. P. Ingels, *Acting Secretary.*

279 Minutes of Meeting of Executive Committee of the General Munitions Board held Saturday, June 9, 1917, at 8:30 a. m., in the Munsey Building

Present: Colonel Hodgson; Colonel Blunt; Major Pierce; Dr. Simpson; Paymaster Hancock; Mr. F. A. Scott; Mr. Bolton; Mr. H. P. Ingels; Mr. Scott, presiding; and Mr. H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Prices—Steel.—Mr. Scott reported the result of an interview with Mr. Farrell, of the Steel Committee, and advised that the price of $3.75 had been agreed upon for approximately 65,000 tons of steel required for 9,000,000 3″ shell forgings.

Prices—Towels.—As a result of the memorandum dated June 7th, from the Committee on Supplies, the price for 239,000 bath towels, as covered by the memorandum dated June 4th, from the Medical Supply Office in New York City, addressed to Dr. F. F. Simpson, was approved.

Raw Materials—TNT.—The Ordnance Departments of the Army and Navy not being in position to give any definite figures as to their respective requirements of TNT, this matter was referred to the Raw Materials Committee for future reference.

Cantonments.—General Form of Memorandum to be handed to Colonel Littell for the letting of contracts for the construction of cantonments to certain contractors.

280 This general form of recommendation as coming from the Board was approved.

Committee on Inventions.—It was moved by Major Pierce and duly seconded that a Committee on Inventions be appointed, this committee to be one of the subcommittees of the General Munitions Board.

Mr. Scott requested Paymaster Hancock to confer with Major Kelly and to submit a report at the general meeting of the Board on Tuesday, June 12th, 1917.

3″-Cartridge Cases.—A letter of June 6th, from the Ordnance Department, addressed to the Board, regarding the awarding of contracts for cartridge cases, was presented and approved.

Appointments.—Recommendation from the Chamber of Commerce of the United States for Appointments on Priority Board and for a Committee to Determine Percentage to be paid to Various Industries.

Mr. Scott was authorized to appoint two committees whose duties it will be to choose the names of members of the committee to determine percentage of profits and also for choosing four members of the Priority Board.

The Committees appointed are as follows: Percentage, Mr. F. A. Scott, Mr. Howard Coffin, Mr. Rosenwald; Priority, Mr. F. A. Scott, Mr. Howard Coffin, Mr. Rosenwald, General Aleshire.

281 *Raw Materials—Reported Shortage of Abrasive Materials.*—A letter from the Norton Company was submitted to the Board. This was referred to Colonel Blunt, who proposed to hold a conference with the Norton Company, of Worcester, Mass., on Wednesday, June 13th, and report back to the Board the result of his interview.

Hopkins & Allen Arms Company.—In accordance with the report submitted by Mr. Vauclain, it is the opinion of the Board that the Hopkins & Allen Arms Company at the present writing are not in position to undertake the Manufacture of Springfield rifles. This matter was considered closed therefore.

Raw Materials—Mercury.—A letter was presented from the Office of the Chief of Staff regarding the supply of mercury in California and order referred to Mr. Summers for attention.

Optical Instruments—Bureau of Ordnance, Navy.—Requisitions Nos. 140, 147, and 148, covering optical instruments, were submitted by Paymaster Hancock for clearance of necessary optical glass and same were ordered cleared.

Clearance—Duck for Gas Masks.—As per memorandum dated May 21st, addressed to Major Pierce, from the Medical Corps, duck for gas masks was granted clearance.

Meeting adjourned at 10:20 A. M.

H. P. Ingels, *Acting Secretary.*

282 Minutes of Meeting of the General Munitions Board held Tuesday, June 12, 1917, at 11 a. m., in the Munsey Building

Present: Admiral Zane, Admiral Rousseau, Admiral Mason, Admiral Capps, General Aleshire, General Curse, Colonel Hodgson, Colonel Dunn, Colonel Fisher, Major Pierce, Major Wallace, Paymaster Hancock, Commander Kearney, Commander Leigh, Major Kelly, Dr. Simpson, Mr. Summers, Mr. Rogers. There were also present: Mr. Carl Vrooman, Asst. Secretary of Agric.; Mr. Bulkely; Mr. Brown; Mr. F. A. Scott, Chairman; and Mr. H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Priority—(a) Report of Priority Committee.—A report dated June 9 of the Priority Committee was submitted to the Board together with a memorandum dated June 12th, referring especially to the clerical force and office space required by the Priority Committee.

It was moved by Commander Kearney and seconded by Paymaster Hancock that the report and memorandum be endorsed by the General Munitions Board and referred to the Council of National Defense.

Priority—(b) Cancellation of contracts in connection with prior needs of the Government.—A memorandum of June 11th, from the Raw Materials Committee, together with Memorandum dated June 2nd from the Judge Advocate General's office was submitted to the Board and referred to the Priority Committee for attention.

283 *Raw Materials—Shortage of Optical Glass.*—A memorandum dated June 12th, was presented by Dr. Milliken and referred to the Committee on Optical Glass.

Prices—Meshed Steel Visors.—A letter dated June 11th, addressed to Mr. A. Comstock Pratt, of Montclair, N. J., was submitted to the Board and the price therein quoted was approved.

Army requirements—Distribution of Orders for the Manufacturer of 3″ Cartridge cases.—The distribution of orders for 3″ cartridge cases as tabulated in Colonel Hoffer's letter dated June 6th, addressed to Mr. Scott, was submitted to the Board. As moved by Major Pierce and seconded by Colonel Hodgson, this distribution was approved by the Board.

Army Requirements—Balancing Production.—It was suggested by Colonel Dunn that the Board adopt a general policy for the balancing of the production of various munitions. This general plan necessarily will be based on the report from the General Staff as to the probable requirements.

Major Pierce was requested to submit such a report for consideration of the Board. (No memo issued.)

Nautical Instruments.—A memorandum dated June 12th, signed by Dr. Milliken, regarding nautical instruments, was submitted to the Board. It was moved by Mr. Summers that the National Research Council be asked to appoint a committee to investigate nautical instruments, and at the suggestion of Commander Kearney, the National Research Council was requested to appoint a member of the Bureau of Navigation to serve on this committee.

Raw materials used in the Manufacture of 9,000,000 rounds of 3″ field-gun ammunition. A letter of May 31st from Lt. Colonel Hoffer was submitted to the Board and approved with the exception

284 that the ordnance Department was requested to add to the list of requirements all material necessary for the manufacture of small ammunition.

Col. Hoffer was requested to give this information to General Munitions Board.

Raw Materials—Steel.—It was moved by Admiral Capps and seconded by General Aleshire that the Steel Committee be asked to submit to the General Munitions Board a list of all manufacturers either refusing to accept their pro rata share of Government tonnage, or exhibiting a spirit of noncooperation.

Cantonments—Contract for the Construction of Cantonment at American Lake.—A recommendation from the Committee on Emergency Construction was read and given careful consideration. It was moved by Major Pierce and seconded by Admiral Capps, that the contract for the construction of the above cantonment be placed with the Hurley Mason Company of Tacoma, Washington.

It was suggested by Admiral Capps that full details as to the reasons for giving this company the contract be outlined in the Munitions Board's recommendation.

This motion was carried. There were three dissenting votes.

Personnel of Various Committees.—In accordance with the action of the Board, a memorandum is to be prepared and submitted to

each member of the General Munitions Board for consideration. In this memorandum is to be given complete personnel of each committee, stating opposite each member's name his business connections and affiliations, the idea being to determine whether or not members of the various committees are acting as both buyer and seller.

Attention was called to the fact that the Board has no authority to purchase. Referred to Mr. Bolton.

285 This matter was deferred for future action.

Cantonments—Accountancy Committee.—Memorandum dated June 11th, from Colonel Littell, with attached memorandum dated May 30th, addressed to the Quartermaster General, over the signature of Newton D. Baker, Secretary of War, and memorandum dated June 1st, addressed to Colonel Littell, over the signature of General Sharpe, Quartermaster General, were submitted for the information of the Board.

This matter was referred to the Accountancy Committee.

Clearance.—As requested in memorandum of May 31st, from the United States Engineers Office, New Orleans, lumber, drift bolts, spikes, and nails listed therein were cleared.

Resolution Adopted by Council of National Defense.—For the information of the Board the resolution above referred to, dated June 8, 1917, was read (re: Appointments of Committees).

Army Requirements—Gun Forgings.—As moved by Major Pierce, the Board approved the memorandum dated June 8th, from S. M. Vauclain, addressed to General Crozier, recommending that the following contracts for forgings be placed with the Heppanstall Knife & Forge Co. for 5,000,000 lbs. Gun Forgings, based on their proposition of June 8, 1917; Standard Steel Works Co. for 5,000,000 lbs. Gun Forgings, based on their proposition dated June 2, also memorandum from S. M. Vauclain, dated June 7, 1917; McMyler Interstate Co. for 5,000,000 lbs. Gun Forgings.

Clearance.—(a) As requested by Major Simpson, clearance was granted on 80,000 mattresses, 400,000 pajamas, and 300,000 sheets.

(b) As requested by Paymaster Hancock, clearance was granted on 187,000 board feet of lumber for the Marine Corps.

286 Douglas Fir Spare for the Boston Yard was covered by requisition No. 793.

Appointments.—(a) Mr. Chester C. Bolton's resignation as Secretary of the General Munitions Board was accepted and his appointment as Assistant to the Chairman was approved.

(b) Mr. H. P. Bingham's appointment as Secretary of the General Munitions Board was approved.

Report of the Production Program Committee.—The report of the above committee, dated June 12th, was read. It was moved by Commander Kearney and duly seconded, that copies of this report be sent to each member of the General Munitions Board for their consideration.

Clearance.—At the request of Mr. Summers clearance was granted on approximately 8,000 tons pig lead at 8¢ lb. f. o. b. St. Louis.

The meeting adjourned at 12:40 P. M.

H. P. INGELS, *Acting Secretary.*

287 **Minutes of Executive Committee Meeting of the General Munitions Board held Wednesday, June 13, 1917, at 8:30 a. m., in the Munsey Building**

Present: Colonel Hodgson; Major Pierce; Paymaster Hancock; Mr. Rosenwald; Mr. Bingham; Mr. F. A. Scott, presiding; and Mr. H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Cantonments—General Form of contract.—The report of the Accountancy Committee, dated ———, was submitted to the Board and referred to Mr. Bulkley for an opinion as to whether or not the proposed changes are practical and if in his opinion they are practicable he is instructed to forward immediately a copy of the Accountancy Committee's report to Colonel Littell as approved by the General Munitions Board.

Clearance.—(a) 75 tons of steel for hangars at Honolulu cleared.

(b) Articles tabulated in letter of May 23d from District Engineer's Office, New York City, to Chief of Engineers, cleared.

(c) Distillate and about 20,000 feet Oregon pine lumber, as per memorandum of May 26th, addressed to the Chief of Ordnance, from U. S. Engineer Office at San Francisco. Cleared.

(d) Fuel Oil and Lumber, as per memorandum from

288 Office of District Engineer, Portland, Oregon, dated May 29th, to the Chief of Engineers, U. S. Army—Lumber cleared. The question of clearance for the fuel oil was referred to the Raw Materials Committee.

Navy Requirements.—A letter dated June 12th, over the signature of W. H. Vandervoort, together with supplementary pamphlet explaining specifications for minor calibre projectiles, was submitted to the Board for their information. No action necessary.

Appointments.—A letter of June 12th, over the signature of J. R. Kilpatrick, addressed to W. A. Starrett, was submitted to the Board. Before any action is taken by the Board this is referred to Mr. Starrett with a request that he advise the Board as to the possibility of the Thompson-Starrett Company receiving a contract for the construction of a cantonment.

Appointments.—Memorandum dated July 11th, from the Quartermaster General, addressed to the Secretary of War, recommending that R. H. Williams, Jr., be appointed as an advisory committee on purchase of public animals and on the Remount Service for the Army during the present war, was submitted. This matter was referred to Mr. Bingham with a request that he confer with Mr. Gifford and that he submit the result of this conference to the Board for further consideration.

Procurement of Forage for Government Animals.—A memorandum from the Quartermaster General, dated June 11th, was submitted to the Board and the following action taken:

1st. Mr. Scott is requested to put this matter before Mr. Hoover informally.

2nd. Colonel Hodgson is requested to check up the figures

289 tabulated in the above memorandum.

3rd. Mr. Scott is also to confer informally with Mr. Carl Vrooman, Assistant Secretary of Agriculture, on the subject.

Cantonments—Sites Selected.—The Board was advised that the following sites had been decided upon: Chillicothe, Ohio; Fort Sam Houston, Texas; Louisville, Kentucky; Battle Creek, Michigan; Little Rock, Arkansas. This matter was referred to the Committee on Emergency Construction for recommendations.

Raw Materials—Steel Shell Forgings.—Mr. Meyer's memorandum dated June 11th, addresed to Mr. Bolton, was read for the information of the members. No action necessary.

The meeting adjourned at 10:20 A. M.

H. P. Ingels, *Acting Secretary.*

290 **Minutes of Meeting of the General Munitions Board held Thursday, June 14, 1917, at 11 a. m., in the Munsey Building**

Present: Admiral Rousseau, Admiral Capps, Admiral Zane, General Aleshire, Colonel Dunn, Colonel Hodgson, Major Pierce, Major Simpson, Major Kelly, Commander Leigh, Commander Kearney, Major Wallace, General Cruse, Mr. Rosenwald, Mr. Rogers, Mr. Summers, Col. Blunt, Mr. Meyers. There were also present: Admiral Richie; Asst. Surgeon Gen. of the Army; Mr. Starrett; Mr. Downman; Mr. Vandervoort; Mr. Vauclain; Mr. Davies; Mr. F. A. Scott, presiding; and Mr. H. P. Ingels, acting secretary.

The reading of the minutes of the previous meeting was dispensed with.

Cantonments—Changes in form of Contract.—Changes in the general form of contract as covered by memorandum from the Legal Committee, addressed to Mr. Scott under date of June 13th, was submitted to the Board, and, as moved by Colonel Hodgson, these changes were approved.

Cantonments—Recommendations for placing contracts.—The following recommendations were made by the Board for the construction of cantonments:

Louisville, Kentucky—Mason & Hanger, Richmond, Ky.
Battle Creek, Mich.—Porter Bros., Detroit.
Chillicothe, Ohio—Crowell, Lundoff, Little Co., Cleveland, Ohio.
291 Fort Sam Houston, Texas—Stone & Webster, Boston, Mass.
Fort Riley, Kansas—George A. Fuller Co., Kansas City, Chicago, New York, N. Y.

It was moved by General Cruse and seconded by Colonel Hodgson that the above recommendations be made.

It was moved by Admiral Capps and duly seconded and carried that the general form of recommendation which is to be sent by the Munitions Board to Colonel Littell or other officer in charge of the placing of contracts for the construction of cantonments read as follows:

The Qualifications of ------ ------ as to his ability to build the cantonment at ------ having been fully considered by the subcommittee of the General Munitions Board having this work in charge, in accordance with the plan heretofore approved by the Board, the findings of this Committee are received and approved and ordered submitted to Colonel Littell, of the Quartermaster's Department, in charge of cantonment construction.

The committee on Emergency Construction was requested by the Board to modify the wording of their recommendations so that, in recommending a contractor for any particular contract, attention be called to the said contractor's activities within the district where the cantonment is to be located.

Inventions Board.—Before submitting to the Board the question of appointing an Inventions Board, it is suggested that Paymaster Hancock confer with Mr. Gifford, reporting the result of his conference to the Board.

Raw Materials—Reports.—(*a*) A report from Mr. Summers dated June 14th, regarding Grade "A" Slab zinc, copper, and lead, was read and approved by the Board. Copies of this report were ordered sent to the interested Departments.

292 (b) Report from Mr. Bingham, dated June 14th, regarding the price of cement was approved by the Board.

Copies of this report were ordered sent to the interested Departments.

Apparent Shortage in Supply of Cable.—A telegram was read from the fire commissioners of New York stating that they were unable to get delivery on cable, giving as the reason that the Government had commandeered certain plants furnishing cable to the extent that their supply was cut off.

There was no action taken on this other than questioning various members of the Board, revealing the fact that there has been no commandeering of such plants by the Government.

Appointments.—(*a*) As requested by Ralph Earle, Chief of the Bureau of Ordnance, Admiral N. E. Mason was appointed a member of the Committee on Army and Navy Artillery.

(*b*) As per request from Admiral Rousseau, dated June 14th, Major R. E. Wood was appointed a member of the General Munitions Board, representing the Emergency Fleet Corporation.

(*c*) The Board was advised that Mr. Catchings had been appointed Assistant to the Director of the Council of National Defense to represent the Chamber of Commerce of the United States.

Committee on Woolen Manufacturers—W. L. Marvin, associated with Patterson & Greenough.—A memorandum, dated June 3d, from Mr. Eiseman regarding Mr. W. L. Marvin was read to the Board. No action necessary.

293 *Priority Board—Plates required by the Utah Power Co.*—Action in this matter deferred.

Marine Boilers.—Memorandum, dated June 13th, over signature of Mr. Baruch, to General Aleshire was read calling attention to the fact that the French Munitions Commission would like to contract for 50 marine boilers.

Action on this matter was ordered held over until Tuesday, June 21st, with a request that in the meantime Commander Leigh investigate as to boiler tubes.

Machine Gun Production.—Mr. Bascom Little presented an informal report regarding the progress of the Committee on Machine Guns and also the Browning light automatic machine gun for shoulder use. Mr. Little called attention also to the fact that he had not received requirements from the Signal Corps.

Colonel Blunt was requested to locate the report from the Machine Gun Committee for the information of the Board.

Raw Materials—Apparent shortage of Abrasive Material.—Colonel Blunt reported the result of his interview with the Norton Company, stating that he had requested them to tabulate more definite information, which will be submitted to the Board.

Canned Goods Requirements.—For the information of the Board, memoranda from the Committee on Supplies regarding the food situation and canning production were read and ordered recorded.

Gun Forging Contracts.—Mr. Vauclain gave the Board some information as to the progress being made by the Committee on Army and Navy Artillery, especially as to the development of new facilities.

294 He stated that they had developed facilities for manufacturing approximately 65,000,000 lbs. gun forgings, and further, machining capacity can be provided as fast as forgings can be procured. He further stated that the total estimated requirements of the Army and Navy were approximately 65,000,000 lbs.

Reports from Committees.—Reports submitted by various committees were ordered recorded.

Lumber Committee.—Mr. Dowman gave an informal report as to the lumber situation in regard to the construction of cantonments, stating that the estimated amount required for the sixteen cantonments was 200,000,000 board feet, and that the Lumber Committee was convinced that this material could be delivered within ten days, providing cars can be furnished.

Motor Trucks.—Colonel Hodgson was requested to find out the result of the opening of the bids in Chicago on June 10th.

Mr. Toulmin was directed to confer with Colonel Hodgson & Mr. Zimmerscheid and tabulate bids and other general information regarding the present status of the situation.

Progress Report.—A report dated June 12th, stating the progress on contracts, was read to the Board and ordered filed.

Forage Requirements.—As to the question of forage requirements, Colonel Hodgson explained what the present figures were based on. He was requested by the Board to complete these figures and to confer with Dr. Hoover, reporting back to the Board the result of his conference.

295 *Cantonments—Basis for Determining Contractors.*—As a result of further discussion regarding the awarding of contracts, it was moved by Colonel Dunn, duly seconded, and carried:

That in cases where one contracting firm stands out preeminently above all others in any district where a cantonment is to be built, the Board recommend that the contract be given to that firm.

Follow up.—Submitting of report on the best method of following up progress of manufacture of munitions was held over for the meeting on Tuesday, June 21st.

The meeting adjourned at 1:45 P. M.

H. P. Ingels, *Acting Secretary.*

296 Minutes of Meeting of the Executive Committee of the General Munitions Board held Friday, June 15, 1917, at 8:30 a. m., Munsey Building

Present: Colonel Hodgson; Colonel Blunt; Major Pierce; Paymaster Hancock; Dr. Simpson; Mr. Bolton; Mr. Bingham; Major Pierce, presiding; and H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Cantonments—Selection of Contractors.—A report signed by Mr. Starrett, dated June 12th, with attached list of preferred contractors, was submitted to the Board for their information and copy ordered to be sent to Colonel Littell.

Labor—Condition as reported by the Tennessee Copper Co.—A memorandum dated June 12th, from the Chief of Military Intelligence Section, together with three enclosures, was submitted to the Board for information and ordered filed.

Appointments.—In accordance with memorandum from General Aleshire, Mr. W. L. Stoddard's appointment as a member of the Priority Committee was approved.

Emergency Construction Committee.—A letter dated June 12th, over the signature of J. R. Kilpatrick, regarding his present status as an assistant to the above committee, was submitted to the Board.

297 Mr. Starrett advised that the Thompson-Starrett Company is now being considered for a contract for the construction of a cantonment, but advised that Mr. Kilpatrick is not a member of the Committee.

It was moved by Colonel Hodgson, duly seconded and carried, to the effect that the Board could see no objection to Mr. Kilpatrick's connection with the Committee on Emergency Construction.

Army requirements—Steel For Magazine Rifles.—A memorandum dated June 12th, over the signature of Colonel Thompson wherein the Ordnance Department requested assistance from the General Munitions Board toward getting better prices for steel to be used in the manufacture of U. S. magazine rifles, together with thirteen enclosures, was submitted to the Board and referred to Colonel Blunt for investigation.

Army Requirements—Proposed Gun Forging Contract with the Crucible Steel Company of America.—A memorandum dated June 14th, over the signature of Major Benedict Crowell, together with a copy of a letter from the Crucible Steel Company of America, addressed to Mr. S. M. Vauclain, dated June 1st, was submitted to the Board and ordered referred to Mr. Scott.

Clearance—(a) Anchor Boats.—As requested by Major Kelley, 36 anchor boats required for the defense of the entrance of Delaware Bay was this day granted clearance by the Board.

298 *Clearance—(b) Sheet Steel Required for Stove Pipe.*—As requested in the memorandum dated June 13th, from the Brig. General of the Quartermaster Corps, the Board this day approved clearance of sheet steel for stove pipes required by the Quartermaster at Philadelphia.

Cantonments—Little Rock, Arkansas—Recommendation for contracts.—Based upon report from the Committee on Emergency Construction, it was moved by Colonel Blunt and seconded by Paymaster Hancock, that the Munitions Board make the following recommendations for the awarding of the contract for the construction of a cantonment at Little Rock, Arkansas:

James Stewart Company, 1st Choice.

J. W. Thompson, New Orleans, La., 2nd Choice.

Cantonments—Report of Lumber Committee Regarding Prices.—The following papers were submitted to the Board:

1. Statement of Dr. Wilson Compton concerning prices of Southern Pine for cantonments.

2. A telegram dated June 14, Memphis, Tenn., from the Southern Pine Emergency Bureau, addressed to Mr. R. H. Downman, Chairman of the Committee on Lumber.

3. A letter dated June 14th, addressed to Hon. Newton D. Baker, signed by R. H. Downman.

4. Memorandum dated June 15th, addressed to the Executive Board, over the signature of R. H. Downman.

It was moved by Colonel Hodgson and seconded by Colonel Blunt, that a base price of $20.00 per thousand for southern pine and $22.00 per thousand for Carolina pine be approved by the Board as fair and reasonable. This action was carried.

299 As per memorandum dated June 15th, these papers were handed to Major Pierce for attention.

The meeting adjourned at 10:40 a. m.

H. P. INGELS, *Acting Secretary.*

300 **Minutes of Meeting of the Executive Committee of the General Munitions Board held on Saturday, June 16, 1917, at 8:30 a. m., in the Munsey Building**

Present: Major Pierce; Colonel Blunt; Colonel Hodgson; Dr. Simpson; Paymaster Hancock; Mr. Olmstead; Mr. Bolton; Major Pierce, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Cantonments.—Mr. Olmstead stated that the Secretary of War had issued orders to Colonel Littell, together with a report from the Medical Department, ordering certain radical changes in the plans which have been drawn up for the construction of cantonments.

Colonel Littell had decided to go ahead with the original plans of the buildings but to change their position on the grounds to leave room for extensions, which extensions, if carried out would meet the Medical Department's requirements as to air, space, etc. He stated that other structural changes had been suggested.

Cantonments—Prices of Lumber.—Major Pierce read a report which he was submitting to the Secretary of War relative to the prices of lumber suggested in various correspondence referred to in minutes of June 15th, which were addressed to the Secretary of War and were to be submitted to him by Major Pierce. This mem-

301 orandum was accepted and ordered, together with the papers above referred to, sent to Colonel Littell, Major Pierce having

reported that the Secretary of War had approved all of the recommendations.

Cantonments—Recommendations of Contractors.—The Emergency Construction Committee recommended the following:

1. That the cantonment at Yaphank, Long Island, be given to the Thompson-Starrett Company of New York City.

2. Cantonment at Petersburg, Va., be given to Rinehart & Dennis Co., Inc., of Charlottesville, Va.

3. Cantonment at Rockford, Ill., be given to Bates & Rogers Construction Co., Chicago, Ill.

The Board approved these recommendations and ordered them submitted to Colonel Littell.

Buildings for Signal Corps—Request for Capable Contractors.—1. A communication from Major Wallace of the Signal Corps, dated June 15th, inquiring for the name of the contractor best equipped for the construction of the aviation training camp to be erected in the vicinity of Bellville, Ill., was received and ordered referred to the Committee on Emergency Construction for report.

2. A similar communication from Major Wallace, asking for the name of the contractor best equipped to build a permanent supply depot on the Wilbur Wright Flying Field at Dayton, Ohio, was accepted and ordered referred to the Committee on Emergency Construction for report.

Gun Forgings—Buckeye Steel Castings Co.—A communication from the Committee on Army and Navy Artillery, addressed to the Chief of Ordnance, suggesting that a contract for 2,000,000 lbs. of gun forgings for 3″ field guns be placed with the above concern, was approved.

302 *Clearance—Petroleum—Engineers Corps.*—Clearance was granted the Engineer Corps on 120,000 barrels of petroleum inquired for in their communication of May 29th, 1917, File No. Def. 817/6.

Prices—Webbing.—Colonel Blunt presented five communications from the Ordnance Department, asking for confirmation of prices on webbing, orders to be placed with:

1. Rochland Webbing Co.
2. Everlastic Co.
3. Hamilton Cotton Co.
4. American Felt Co., Messrs. Strooch & Sons.
5. Anonia O. & C. Company.

The prices being approximately the same as those previously approved by the Committee on Supplies, Colonel Blunt was authorized by the Board to approve these prices for the Board as Mr. Eisenman of the Committee on Supplies was unavailable and immediate action was requested by the Ordnance Department.

Priority—Request from Rock Island Arsenal for Steel.—Colonel Blunt submitted a communication dated June 15th, asking that certain orders for steel placed with the Bethlehem Steel Company, the Crucible Steel Company of America, and the L. Helmuth Co., by the Rock Island Arsenal, be expedited. This matter was ordered referred to the Priority Committee with particular instructions that speed was necessary.

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303 *Prices—Machine Guns.*—Colonel Blunt presented a communication from the Ordnance Department of the Army, in connection with an order placed by them on June 12th, with the Savage Arms Company, for 4,400 Lewis machine guns, and asking that a fair and just price be suggested to them.

This communication, together with copies of letters in reference to previous purchases, Nos. O. O. 472.5/112/177, O. O. 334.8/64 and O. O. 334.8/119, were referred to the Committee on Machine Guns who should confer with Colonel Blunt on this subject.

Prices—Raw Materials.—Colonel Blunt presented a communication dated June 15th, to go to the Raw Materials Committee, advising that the prices named on zinc, lead, etc., by the Raw Materials Committee in their communication of June 13, 1917, covering such material going into the 9,000,000 rounds of 3″ artillery ammunition order by the Ordnance Department were highly satisfactory to the Ordnance Department.

Motor Trucks.—Colonel Hodgson reported that the allies were getting anxious regarding the motor-truck situation due to the fact that bids sent out by the United States Government recently for from one to thirty-five thousand trucks had so disturbed the market that they could not place orders for themselves.

Colonel Hodgson was asked to investigate this situation.

The meeting adjourned at 9:45 a. m.

H. P. BINGHAM, *Secretary.*

304 Minutes of Meeting of the Executive Committee of the General Munitions Board held June 18, 1917, at 8:30 a. m., in the Munsey Building

Present: Major Pierce; Colonel Hodgson; Paymaster Hancock; Colonel Blunt; Mr. Rosenwald; Dr. Simpson; Mr. Bolton; Mr. Bascom Little, of the Machine Gun Board; Major Pierce, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Machine Guns for Aeroplanes.—A communication from Mr. Chester C. Bolton, Assistant to the Chairman, addressed to Mr. Howard E. Coffin, Chairman of the Air-Craft Production Board, dated June 16th, was presented to the Board, relating to (1) the production of cylinders for use in aeroplanes; (2) the production of 24,000 machine guns for aeroplane use; (3) the possible interference in motor-truck manufacture by the requirements for aeroplanes; and (4) the possible interference with manufacture of other army and navy requirements by the requirements of aeroplane factories off workers.

No action was taken.

Referring to the requirements for aeroplane machine guns, Major Pierce inquired from Mr. Little whether it would be
305 possible to take care of these requirements as well as those of the army and navy. Mr. Little replied that it was highly improbable that this could be done, and went carefully into the production possibilities of the country. He brought out the necessity for the immediate placing of larger orders with the Savage Arms Company for Lewis guns so that their plant could be enlarged.

Colonel Blunt stated that as soon as the Chief of Staff gave to the Ordnance Department the army's requirements for machine guns, the Ordnance Department would place the orders.

The possibility of making the Marlin Colt Machine gun at the Marlin Arms Company was brought out by Mr. Little. He likewise stated that a follow-up organization to get the production of machine guns should be installed.

Mr. Scott then entered the meeting.

Auto Trucks for Ammunition.—Colonel Blunt stated that no orders for auto trucks for ammunition had been placed and that the Ordnance Department was not intending to use standard trucks. In two weeks the Department will give the Board their requirements.

Raw Materials—Antimony.—A wire from Mr. Wettstein, President of the United Lead Company, addressed to Colonel J. E. Hoffer, Ordnance Department, was presented by Colonel Blunt, in which the purchase of antimony to be used in the manufacture of shrapnel balls was discussed. The Secretary was instructed to consult with Mr. Summers and to notify Colonel Blunt.

306 *Prices—Steel.*—Colonel Blunt presented a communication addressed to the Chief of Ordnance from the Ordnance Department, stating that the Committee on Steel and Steel Products had arranged a price of $4.30 for the 112,000 tons of steel to be used for six-inch shell forgings. This price was approved by the Board.

Prices—Raw Material—Lead.—Paymaster Hancock presented a communication referring to the memorandum of the Raw Materials Committee of June 13th, regarding the price of zinc, copper, and lead, attaching copy of communication addressed to Mr. B. M. Baruch, by the Secretary of the Navy, approving the price of 8¢ for lead for immediate requirements, and stating that the acceptance of this price should in no way be regarded as a precedent.

Mr. Meyer, of the Raw Materials Committee, was then called in. He stated that the prices recommended for zinc, lead, and copper were satisfactory in the opinion of the Raw Materials Committee, taking all conditions into consideration, and gave certain figures to substantiate his statement.

The communication from Paymaster Hancock was ordered received and a copy ordered sent to the Raw Materials Committee and the Ordnance Department.

Cantonments—Accountant to Supervise Constructions.—A communication from the Accountancy Committee of this Board, relative to the appointment of a representative of the Government to supervise the purchase of material and other elements of cost entering into the execution of a cantonment contract and suggesting that Major W. A. Dempsy act as the Government's representative, was presented and approved and ordered sent to Colonel Littell.

307 *Prices—Steel for Ships.*—A communication from General G. W. Goethals, addressed to Mr. Scott, asking for assistance in the matter of purchasing steel for the Emergency Fleet Corporation, was presented and ordered referred to Mr. Summers, and a reply sent to General Goethals to the effect that the Board would give him its assistance.

Raw Material—Hides.—Mr. Rosenwald informally reported that fifty million dollars worth of hides had been arranged for through a tanner's association.

Clearance—Lumber.—Clearance was given the Navy Department on lumber covered by their Washington Yard requisition #939, dated June 11th, which was presented to the Board by Paymaster Hancock.

Committee Membership—Machine-Gun Committee.—It was moved and carried that Colonel S. E. Blunt be added as a member of the Machine Gun Committee of this Board.

The meeting adjourned at 11 a. m.

H. P. BINGHAM, *Secretary.*

308 **Minutes of Meeting of General Munitions Board held Tuesday, June 19, 1917, at 11 a. m., in the Munsey Building**

Present: Major Pierce; Colonel Hodgson; Commander Leigh; Major Wallace; Major Kelly; Commander Leigh; Colonel Dunn; Colonel Blunt; Dr. Hale; Dr. Simpson; Admiral Capps; General Cruse; Admiral Rousseau; Admiral Zane; Paymaster Hancock; General Aleshire; Admiral Richie; Mr. Rosenwald; Mr. Howe; Mr. Meyer; Mr. Zimmerscheld; Major Brown; Major Wood; Major Stimpson; Mr. Starrett; Mr. Toulmin; Mr. Bolton; Mr. Scott, presiding; and Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Organization—Investigation by Major Stimpson.—Mr. Scott stated that now that the emergency in connection with the work of the Board is somewhat lessened that it seemed right to so organize that the Board and the members of its subcommittees shall be free from reasonable criticism. This is particularly necessary in relation to the membership on a board or subcommittee of a man who is actively interested in a concern which may benefit by the awarding of a contract concerning the recommendation of which the subcommittee or board has some authority.

309 To investigate this condition Mr. Scott suggested that the Board ask Major Stimpson if he would be willing to give his time to this matter. Major Stimpson stated that he would be glad to do this. He thereupon asked what functions the Board and its subcommittees had and was informed that the final decision regarding the awarding of contracts did in no case rest with the Board or its subcommittees. He asked whether the final decision by the Government officer was simply based on the experience of the Board's recommendation and was informed that this was not always the case, as recommendations of the Board had been reversed on several occasions, the contractor for the cantonment at Chillicothe, Ohio, being mentioned—likewise reversal of the decision by the Secretary of the Navy of the recommendation of the Board regarding the price of gun forgings to be placed with the Bethlehem Steel Corporation.

Major Stimpson asked whether it would help matters if a small body of men constituted by law took the place of the heads of the Departments in making final decisions and awards. Mr. Scott stated that the present plan of the Board was to coordinate and supplement the work of the Departments and that with the present arrangement the small-board idea is impossible.

Mr. Rosenwald gave his opinion that a central purchasing body was necessary.

Colonel Dunn stated that the order of the Secretary of War removing the necessity of bids for purchases led the Ordnance Department to believe that the prices submitted by the General Munitions Board were correct and thus accepted them.

Colonel Hodgson outlined for the benefit of Major Stimpson the method pursued in recommending purchases by the Committee

310 on Supplies. Major Pierce stated that the General Staff had been greatly relieved by the result of the methods used and complimented the Board on the prices received.

It was moved and carried that Major Stimpson be asked to make the investigation and report to the Secretary of War and to the Secretary of the Navy; likewise to send a copy of his report to the General Munitions Board.

Army Requirements—Motor Trucks.—Mr. Zimmerscheld made a report covering the activities of the Automotive Committee, showing the results obtained by their efforts to standardize, viz, that now the principal parts of the trucks are interchangeable. It was brought out that the method of the Quartermaster's Department in purchasing trucks, asking for from one to thirty-nine thousand, was a dangerous and inefficient method to pursue. A definite number of contracts should be inquired for.

Necessity for immediate action was brought out, partly due to the interference with allied buying of trucks and partly due to the needs of our own Government for trucks within a short time.

Cantonments—Recommendation of Contractors.—The Committee on Emergency Construction recommended that the cantonment to be built at Des Moines, Iowa, be awarded to Charles Weitz' Sons, Des Moines, Iowa, and that the cantonment at Annapolis Junction, Md., be given the Smith Hauser, MacIsaac, Inc., N. Y., N. Y. These recommendations were approved after consideration.

311 *Prices—Steel Plates for Shipping Board.*—A letter addressed to Mr. Scott from General Goethals, asking for assistance in purchasing steel plates for the Shipping Board, was presented, and Mr. Scott reported that he had asked President Farrell, of the Steel Corporation, and others to come to Washington and go into the price situation. This was considered by the Board the proper method to pursue.

The importance of the establishment of a price on these steel plates was brought out, and Mr. Scott stated that there were two things that appeared fundamentally right—first, the acquirement of military necessities and, second, these should not be acquired at a price which would greatly benefit those supplying the necessities.

Aviation Buildings—Recommendation for Camp at Bellville, Ill.—The Committee on Emergency Construction recommended that the building of the proposed aviation training camp at Bellville, Ill., be awarded to the Unit Construction Company. After consideration this recommendation was approved.

Offer of Money—Sherwin-Williams Company.—A letter addressed to Mr. Scott, dated June 14th, from the Sherwin-Williams Company, offering a sum of money for a fighting unit, was referred to Major Kelly for report.

Gun Forgings—Crucible Steel Co.—A letter addressed to Mr. Scott by the Committee on Army and Navy Artillery, attaching a communication from the Crucible Steel Company under date of June 1st, in which they failed to cooperate in the matter of production of gun forgings, was read and referred to Mr. Scott to discuss with the Secretary of War.

The meeting adjourned at 1 P. M.

H. P. Bingham, *Secretary.*

312 **Minutes of Meeting of Executive Committee of the General Munitions Board held Wednesday, June 20, 1917, at 8: 30 a. m., in the Munsey Building**

Present: Major Pierce; Paymaster Hancock; Major Simpson; Colonel Blunt; Colonel Hodgson; Mr. Rosenwald; Mr. Meyer; Mr. Bulkley; Mr. Bolton; Mr. Scott; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Aviation—Requirements for Engineers, Machine Guns, and Personnel.—Major Pierce stated that the aviation program was a large one and that the War College was afraid that the furnishing of their supplies would interfere with other trades essential to the conduct of the war. He referred to the communication addressed to Mr. Howard E. Coffin, June 16th, by Mr. Chester C. Bolton, Assistant to the Chairman, answering certain questions asked by the War College, relating to any possible interference, and stated that the War College did not think that this communication had been properly considered.

After some discussion the Board approved the letter from Mr. Bolton, above referred to, with the exception of a few minor changes to clarify it.

313 Major Pierce then stated that the War College wished to know whether the machine-gun program could be carried out, and likewise whether the 97,075 men needed in connection with the aircraft program in France could be supplied.

The meeting thereupon adjourned until 11:30 a. m., in order to be better prepared to answer these questions.

The meeting reconvened at 11:30 a. m.

A complete list of the personnel needed in France was presented and the machine-gun situation was discussed.

A memorandum was prepared by the Chairman, addressed to the War College Division, stating in brief:

1. That if the machine-gun program is to be carried out increased facilities for manufacturing machine guns must be immediately developed, and
2. That unless immediate steps are taken to make available mechanical personnel, it would be impossible to supply the needs of the aircraft program in France.

This was approved by the Board, and ordered submitted to the War College through Major Pierce.

Cantonments—Contract for Yaphank, L. I., Cantonment to be considered.—A memorandum from Colonel Littell, approved by the Secretary of War, was presented asking the Board to reconsider their recommendation for contractor to build cantonment at Yaphank, Long Island, because of the interest which Chairman W. A. Starrett had in the Thompson-Starrett Company, which firm had been previously recommended.

The matter was referred to Mr. R. J. Bulkley, to investigate the exact standing of Mr. Starrett relative to the Thompson-Star-

314 rett Co., and likewise the George A. Fuller Company.

Raw Materials—Zinc and Copper desired by Italy.—A wire from the Scovill Manufacturing Company, dated June 19th, addressed to Mr. F. A. Scott. relating to the above subject, was referred to Mr. Meyer for attention and report.

Raw Materials—Caustic Soda Required by Italy.—A communication from Mr. William H. Nichols, Chairman of the Committee on Chemicals, dated June 16th, addressed to Mr. F. A. Scott, Chairman, was presented relative to the need for 2,400 tons of caustic soda desired by Italy. This was referred to Paymaster Hancock for investigation and report.

Cantonments—Bonding of contractors.—Mr. R. J. Bulkley was requested to confer with Colonel Littell concerning the action being taken relative to bonding contractors who are to be engaged in the construction of cantonments, and to report to the Board.

The meeting adjourned at 11:45 A. M.

H. P. Bingham, *Secretary.*

315 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Thursday, June 21, 1917, at 8: 30 a. m., Munsey Building**

Present: Major Pierce; Colonel Hodgson; Colonel Blunt; Paymaster Hancock; Dr. Simpson; Mr. Meyer; Mr. Toulmin; Mr. Bulkley; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Army Requirements—Colt Automatic Pistols.—A communication from the Chief of Ordnance, dated June 19th, attaching letter from the Colt Patent Fire Arms Manufacturing Company, addressed to the chief of Ordnance, dated June 11th, likewise a letter of June 2nd, from the General Munitions Board to the Chief of Ordnance, and a communication of May 28th, from the Colt Patent Fire Arms Manufacturing Company, addressed to the General Munitions Board, were presented and ordered accepted.

The above bearing on a misapprehension regarding the delivery of 500,000 automatic pistols ordered by the Ordnance Department from the Colt Company, the delivery commencing 30 days later than formerly stated.

316 *Prices—8" Howitzers for Ordnance Department of the Army.*—A proposed letter addressed to the Chief of Ordnance

of the War Department, in answer to a request for prices for 8″ Howitzers, was approved and ordered sent with a modification as to the percentage of profit to be allowed, changing this to read 15% instead of 10%.

Prices—Wire Nails, portable Tracks, etc.—A communication from Paymaster Hancock relative to prices on the above articles was read. A reply to the letter from President Farrell, of the Steel Corporation, dated June 1, quoting prices, and addressed to Mr. Baruch, was read and ordered received, and Mr. Scott was asked to take this matter up with Mr. Farrell, who is to be in Washington today.

Raw Material—Shortage in Wire Rope.—A communication dated June 14th, addressed to Mr. Scott, from R. H. Downman, Chairman of the Lumber Committee, relative to a reported shortage in wire rope was ordered referred to the Priority Committee for investigation and report.

Raw Material—Shortage in Steel Bands for Tanks, etc.—A communication of June 16th, from the Paymaster General of the Navy, reporting a possible shortage in steel bands for oil and water tanks was read and referred to Mr. Scott to take the matter up with President Farrell, of the Steel Corporation, who is in Washington today.

Clearance—Marine Boilers desired by France.—Clearance was given for 50 marine boilers desired by the French Munitions Commission inquired for in a communication of June 13th, addressed to General Aleshire by Mr. Baruch. This action was ordered presented to Mr. Ganne, of the French Commission.

317 *Optical Glass—Merging of Committees.*—To avoid any possible duplication of effort it was recommended and ordered that the Optical Instrument Committee of the Munitions Standard Board be merged with the Optical Glass Committee of the National Research Council.

Prices—Accountancy Committee report concerning Bethlehem Steel Co.—A report from the Accountancy Committee, dated June 20th, relative to their investigation of the possibility for placing cost-plus contracts with the Bethlehem Steel Company, was read and accepted and referred to Paymaster Hancock.

Committee Membership—Mr. Mears' Committee on Emergency Construction.—A communication from Mr. Mears, dated June 19th, relative to his connection with the Fred T. Ley & Company, Inc., together with his connection with the Committee on Emergency Construction, was presented and action thereon deferred.

Organization Investigation by Major Stimpson.—A letter addressed to Major H. L. Stimpson giving resolution, adopted by the Board on June 19th, covering subject of his investigation of the organization and personnel of this Board, was approved and ordered sent.

Gun Forgings Contracts.—A communication from General Crozier, Chief of Ordnance, dated June 18th, and referring to the Board's letter of May 19th, offering assistance in the letting of gun-forging contracts and addressed to the Secretary of War and to the Secretary of the Navy, stated that the Board's assistance was only needed insofar as in furnishing of names of contractors approved for the receipt of orders. This letter was read and ordered received.

318 *Production Department.*—A letter from Lt. Commander Gardiner, of the Navy, dated June 19th, reporting on the

report of the Production Program Committee, dated June 12th, was read and ordered received.

It was thereupon decided to gather all statistical information possible and allow the situation to take a natural growth.

This report was referred to Mr. Toulmin for attention.

Labor.—A communication from the Chamber of Commerce of the United States relative to the labor situation, dated June 16th, was read. This was referred to Mr. Toulmin, who was asked to draft a report on the subject for the approval of the Board.

Expediting Shipbuilding Materials.—A communication from the Chamber of Commerce of the United States, relative to the above subject, dated June 16th, was read and referred to Mr. Toulmin with a request that he draft a discussion of this subject for approval by the Board.

Clearance—Lumber for Signal Corps.—Clearance was given the Signal Corps on certain lumber inquired for in their communication of June 20th, 1917.

Raw Material—Copper for Signal Corps.—A request for 750,000 lbs. of copper from the Signal Corps, covered by their communication of June 19th, was received and referred to the Raw Materials Committee for their attention.

Cantonments—Request for reconsideration of Yaphank. L. I., recommendation.—In accordance with action of the Board, Mr. Bulkley presented a report showing that Mr. W. A. Starrett has not had any connection with the Thompson-Starrett Company for a period of more than four years.

The first paragraph of this communication was approved
319 without changes. The second paragraph was altered by the addition of a list of contractors to be furnished by the Committee on Emergency Construction, who might have the ability to build the above cantonment.

Mr. Bulkley likewise reported, by request, relative to Mr. Starrett's alleged connection with the George A. Fuller Company, showing that Mr. W. A. Starrett has no connection with said company; but that one of his brothers is the President of the George A. Fuller Company. This report was accepted and ordered kept in the files of the Board.

Army Requirements—Cotton Sheeting for Rock Island Arsenal.—A communication of June 20th from Mr. Eisenman stating that the Rock Island Arsenal had asked for bids and was unable to procure certain cotton sheeting needed for targets was presented. The sense of the meeting was that since the Rock Island Arsenal had asked for bids, which was not in accord with instructions, that they should be allowed to get out of this difficulty.

This matter was referred to Colonel Blunt.

Labor—8-Hour Law.—A communication from the Chief of Ordnance dated June 16th, attaching correspondence relating to the Eight Hour Law from the Unit Engineering and Foundry Company, was presented and it was asked that this correspondence be referred to the Council of National Defense with a statement that there are many cases of a like sort and which will continue until some action is taken.

Raw Materials—Alumina.—Colonel Blunt reported regarding the Norton Company, of Worcester, and recommended that—

1. More cars should be given the Norton Company.
2. The Council of National Defense should protect them regarding electric power.
3. 200 tons per month additional alumina was needed.

The report was ordered received and approved, and it was recommended that Colonel Blunt see the American Railway Association regarding (1) above referred to; regarding (2), to confer with the Director of the Council of National Defense on the subject, and (3) to prepare a letter to the source of supply of alumina for the Norton Company.

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Forage for Army Animals.—Referring to a letter of June 11th, from the Quartermaster General, addressed to the General Munitions Board relating to the above subject, a report from Colonel Hodgson was presented and all papers pertaining thereto were ordered sent to the Committee on Supplies for attention.

Raw Material—Cast-Iron Pipe for Cantonments.—Mr. Meyer brought up the subject of cast-iron pipe required for cantonments, and stated that the Raw Materials Committee have exerted every possible effort to secure the material at the best possible prices.

This was approved by the Board.

Cantonments—Bonding of Contractors.—Mr. Bulkley reported that the Bonding of Contractors, covering contractors executing cantonment work, were now being written on a basis of 2%. It was decided that for this class of work 1% at present would be enough and in accordance with the request of Colonel Littell, verbally expressed by Mr. Bulkley, was designated to take this matter up with the bonding companies and report to the Board.

Clearance—Relining 6″ Guns.—Clearance was given the Bureau of Ordnance, Navy, requisition #172, covering relining 10 6″ guns.

Clearance—Boiler Tubes.—Clearance was given the Bureau of Steam Engineering of the Navy, requisition #70, covering 4,000 4″ boiler tubes.

The meeting adjourned at 10:30 A. M.

H. P. Bingham, *Secretary.*

321 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Friday, June 22, 1917, at 8:30 a. m., in the Munsey Building**

Present: Major Pierce; Colonel Blunt; Colonel Hodgson; Colonel Simpson; Paymaster Hancock; Mr. Rosenwald; Mr. Scott, presiding; and Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Cantonments.—A communication, dated June 18th, from the Chief of Ordnance asking for fair and just prices to be paid for 2,000 Lewis machine guns and a quantity of parts ordered from the Savage Arms Corporation on June 18, 1917, was read and ordered referred to the Machine Gun Committee for report.

Raw Material—Lumber.—A communication from the Star Electrode Works, addressed to the War Department, under date of June 11th, relating to the desire of that company to be assisted in procuring lumber for boxing electrodes for foreign consumption, was presented and the Secretary instructed to prepare a letter for Colonel Blunt's signature, stating that since there was plenty of lumber available it was not necessary for this Board to act.

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Raw Material—Tin Plate for American Can Company.—Colonel Blunt presented a memorandum from the Ordnance Department, dated June 20th, attaching a communication from the American Can Company asking for a letter to assist them in procuring from the American Sheet and Tin Plate Company sufficient tin plate and black plate for the completion of contracts for 3″ shell containers amounting to approximately 8,000,000.

The Secretary was instructed to furnish such a letter to the American Can Company.

Contracts—Governmental Delay in Payments.—Mr. Rosenwald stated that he had heard that certain Governmental Departments were exceedingly dilatory in paying contractors, and that this has hindered the purchasing to a considerable extent.

The Secretary was instructed to ascertain from the Disbursing Department of the Ordnance Department and the Quartermaster's Department what delay there now was between date of bills and date of payment.

Committee Membership—Machine Gun Committee.—Mr. William Frew, of Pittsburgh, Pa., was confirmed as a member of the Machine Gun Committee and appointed its secretary.

Labor—Troubles at Chester Steel Castings Co.—A communication from the Paymaster General of the Navy, dated June 19th, relating to the above subject, was read and ordered referred to Mr. W. S. Gifford, Director, for conference with Mr. Gompers.

Prices—Signal Corps, for Steel Tool Boxes.—A communication of June 29th from the Signal Corps, asking whether prices quoted them on steel for tool boxes represented the best price made to the Government by steel manufacturers.

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The Secretary was instructed to advise the Signal Corps that at present, so far as the Board is aware, there is no general schedule of prices to affect this purchase.

Raw Material—Solder.—A communication from the Signal Corps, inquiring for prices, date of delivery, and name of manufacturers in a position to furnish certain solder as listed, was ordered referred to the Raw Materials Committee, and their report to be referred to the Signal Corps direct.

Prices—10″ Projectiles.—A letter from the Ordnance Department, dated June 19th, stating that an order had been given the American Can & Foundry Company for 24,000 10″ common projectiles at a price of $93.85 f. o. b. Detroit, was presented and ordered received and to be referred to the Committee on Army and Navy Projectiles to ascertain whether the price was similar to other prices received. This for the information of the Board only.

Raw Materials—Cement.—A communication from Colonel Littell, dated June 19th, relative to cement required at various contonment sites, was presented and ordered referred to the Cement Committee for immediate report hereon.

Lumber.—A communication from the District Engineer Officer of Pittsburgh, dated June 20th, referred to this Board, was presented

and ordered referred to the Lumber Committee with the question as to whether the size and kinds of lumber given are such as to warrant further attention of this Board.

Aviation—A recommendation for Contractor at Wilbur Wright Field.—A recommendation of the Committee on Emergency Construction for a contractor to construct reenforced concrete ware-
324 house on the Wilbur Wright Field, near Dayton, Ohio, i. e., Frank Hill Smith, Dayton, Ohio, and New York, was confirmed by the Board and ordered transmitted to the Signal Corps. This recommendation in accordance with the request of the Signal Corps of June 15th.

Cantonments—Recommendation of Contractor at Little Rock.—The Board being in receipt of a communication from Colonel Littel, addressed to the Secretary of War, dated June 21st, suggesting to the Secretary, and approved by him, that the J. W. Thompson Company be given the work at Little Rock, with a 2nd indorsement referring this to the Board and asking for reconsideration of the recommendation, ordered that a third indorsement be added to the effect that the James Stewart & Co. has had much experience in building cantonments and that they would therefore be exceedingly useful at a place so distant as Little Rock, and therefore, confirmed their original recommendation. Likewise a paragraph suggesting in cases where the officer in charge of the construction of cantonments did not wish to observe the recommendation of the Board, that the officer in charge make a substitution without again referring the subject to the Board.

Cantonment—Recommendation for Contractor at Annapolis Junction.—Relative to the Board's recommendation as to the contractor best equipped to complete the Annapolis Junction Cantonment, the following communication was drafted and ordered sent to Colonel Littell—Colonel Hodgson voting in the negative:

In connection with the construction of the cantonment at Annapolis Junction, this Board has heretofore recommended a contracting firm known as the Smith-Hauser-MacIsaacs Company.

At the time this recommendation was made it was the opinion of the Committee on Emergency Construction and the General Munitions Board that no one of the contracting firms in Baltimore had been engaged on the kind
325 of work to qualify it singly to such a degree as to warrant a recommendation of such concern. Within the past few days a corporation has been formed in Baltimore composed of the following companies: The Maryland Dredging & Construction Co., Baltimore, Md.; Arundel Sand & Gravel Co., Baltimore, Md.; J. Henry Miller, Inc., Baltimore, Md.; Morrow Brothers, Baltimore, Md.; Norton, Bird & Requardt, Baltimore, Md. The officers are as follows: Frank A. Furst, President; J. Henry Miller, Vice President: Charles Morrow, Vice President; William H. Morrow, Secretary & Treasurer.

The General Munitions Board recognizes the united strength of these contracting firms but at the same time deems it important as a matter of principle not to depart from the course heretofore followed by it in refraining from recommending combinations of individual concerns and therefore, in this case, does not wish to withdraw the recommendation heretofore made for Annapolis Junction. The Executive Committee of the Board, however, in session today, transmits to the Officer in charge of cantonment construction the papers showing the character and experience of the new corporation known as the Furst-Miller-Morrow Construction Company with the statement that should the Officer in charge deem it desirable to disregard the former recommendation of the Board and award the contract to the Furst-Miller-Morrow Construction Company, the Board will take no exception to such action on his part.

It is requested that copies be made of the documents transmitted herewith for your files, and the originals returned to the Office of the General Munitions Board as early as practicable.

Raw Materials—Steel for Rock Island Arsenal.—Relating to a communication from the Rock Island Arsenal, dated June 12th, asking for assistance in purchasing steel for magazine rifles, Colonel Blunt advised that the date of the communication was now so old that it would be better to let the matter drop. This was accordingly ordered.

The meeting adjourned at 10:30 A. M.

H. P. BINGHAM, *Secretary.*

326 Minutes of Meeting of the Executive Committee of the General Munitions Board held Monday, June 25, 1917, at 8:30 a. m., in the Munsey Building

Present: Colonel Hodgson; Colonel Blunt; Major Pierce; Paymaster Hancock; Mr. Rosenwald; Mr. Bolton; Mr. Summers; Mr. Meyer; Major Pierce, presiding; and Mr. H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Army Requirements—3″ Field Gun Carriages.—(a) A memorandum dated June 31st, from the Committee on Army and Navy Artillery, addressed to the Chief of Ordnance, recommending that a contract be entered into with the Premier Manufacturing Company for 300, more or less, 3″ field gun carriages, was presented. The Board approved this recommendation.

(b) A memorandum dated June 21, from the Committee on Army and Navy Artillery, addressed to the Chief of Ordnance, recommending that a contract be entered into with the Defiance Machine Works, Defiance, Ohio, for 300, more or less, 3″ gun carriages, was presented. This recommendation was approved by the Board.

Clearance.—As requested by Colonel Wallace, as per memorandum dated June 20th, clearance was granted on 15,000 yards of 12″ army duck ordered to be placed with the Wm. H. Hoegee Company, Inc. This was referred to Mr. Eisenman for his information.

327 *Italian Requirements—Seamless Cylinders for Oxygen.*—A letter dated June 19th, over the signature of General P. Tozzi, was submitted to the Board. The Board sees no objection to the placing of orders with the Harris Pipe & Pipe Bending Company for 350 cylinders, and with the Tindel-Morris Company, for 367 cylinders.

Army Requirements—Shoes.—A memorandum dated June 21st, from the Committee on Supplies, calling attention to the requests of certain leather manufacturers that shipments of leather be expedited, was presented. This was referred back to the Committee on Supplies with a request that more specific information be given.

Prices—Reworked Wool Materials required for Government Woolen Goods.—A memorandum from the Committee on Supplies, dated June 20th, calling attention to the fact that the only serious obstacle as to the control of prices, through voluntary cooperation

upon the part of the industry of wool, is the active demand for the export of tailors' clips and rags to Great Britain.

It is the opinion of the Board that effective measures should be adopted for the prevention, or discouragement of the export of woolen rags until the Government's requirements have been provided for. This is referred to Mr. Gifford with the request that he give it early and favorable consideration.

Transportation of Ammunition by Express.—A memorandum dated June 21st, over the signature of Lt. Colonel R. W. Dunn, requesting the issuance of executive orders for the transportation of ammunition by express, was submitted to the Board and referred, over the Board's endorsement, to the Council of National Defense.

328 *Cantonments for the Militia.*—A memorandum dated June 21st, addressed to Mr. Scott, from Colonel Littell, together with a copy of memorandum dated June 19th, addressed to the Chief of Staff, from Colonel Littell, was submitted to the Board and ordered filed for future reference.

Cantonments—Supervision of purchase of Material and Cost on Cantonment Contract.—A memorandum dated June 20th, from Colonel Littell, addressed to the General Munitions Board, was received and ordered filed.

Medical Department's Requirements—Standard Form of Contract to be used in Purchasing Supplies.—A memorandum dated June 22, from the Legal Committee, together with the proposed standard form of contract for use of the Surgeon General's Department for purchasing supplies, was submitted to the Board and ordered referred to Mr. Simpson with the request that he report back to the Board.

Shortage of Abrasive Materials—The Hampden Corundum Wheel Company.—A memorandum dated June 22d, from Colonel Blunt, addressed to Mr. Scott, recommending that action be taken to secure the delivery of one car per week at Franklin, N. C., and its quick transmission to Springfield, Mass., was approved by the Board and ordered referred to the Railway Committee for immediate attention.

Raw Materials—Pig Lead—Requirements of Frankford Arsenal.—A memorandum dated June 19th, from Colonel Montgomery, addressed to the Chief of Ordnance, together with copy of a letter dated June 16th, from Mr. Irwin H. Cornell, addressed to the Frankford Arsenal, were submitted to the Board and ordered referred to the Raw Materials Committee with a request that proper steps
329 be taken to take care of the requirements at Frankford Arsenal.

General Fire-Proofing Company.—A letter dated June 13th, addressed to the Rock Island Arsenal, requesting the privilege of bidding on sabers, scabbards, bayonets, etc., was submitted to the Board for information. Papers returned to Colonel Blunt.

Olmstead-Quaboag Corset Co.—Letter dated June 12th, regarding facilities of above company referred to the Board for information. Papers returned to Colonel Blunt.

Clearance—Telescope Sights.—At the request of Lt. Commander Hancock, clearance was granted on optical glass for 2,000 one-eye piece telescope sights and 2,000 two-eye piece telescope sights, covered by requisition #117, dated June 16.

Navy Requirements—Copper.—Paymaster Hancock referred to the 10,000,000 lbs. of copper required by the Navy Department, advising that the United Metal Selling Company declines to furnish this material unless a price is fixed.

The general situation as regarding copper was informally discussed. Attention was called by Mr. Summers to the fact that the Mexican Government has recently passed a law ordering American labor in the various smelters be replaced by Mexican labor. The Board requested the Raw Materials Committee to submit a concrete statement to the Board at the general meeting, Tuesday, June 26th.

The meeting adjourned at 10:15 A. M.

H. P. INGELS, *Acting Secretary.*

330 **Minutes of Meeting of the General Munitions Board held Tuesday, June 26, 1917, at 11 a. m., in the Munsey Building**

Present: Commander Kearney; Commander Leigh; Major Wallace; Colonel Blunt; Colonel Dunn; Dr. Holcomb; Dr. Millikan; Major Bascom Little; Major Pierce; General Aleshire; Admiral Zane; Admiral Capps; Mr. Allen; General Cruse; Colonel Fisher; Colonel Lemly; Major Woods; Major Brown; Major Kelly; Paymaster Hancock; Admiral Richie; Mr. Meyer; Dr. Simpson; Mr. Howe; Mr. Rosenwald; Admiral Rousseau; Dr. Hale; Mr. Summers; Mr. Rogers; Mr. Bolton; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Weekly Reports.—The Weekly Reports of the subcommittees of the General Munitions Board, dated June 18th, were ordered received, and likewise those dated June 23d were ordered received.

It was moved and carried that such reports be submitted to one member of the Board each week, who shall be designated to read the reports, and that duplicate copies be sent each member of the Board.

Priority—Steel for Canadian Elevators.—A report dated June 23d, from the Priority Committee, enclosing correspondence from the Perfecting Metal Products Company, asking for assistance in getting steel for grain elevators at Alberta, Canada, was sub-
331 mitted. This was ordered referred to the Steel Committee for their attention.

Gas—Proposed Conference.—A report was read from the French Chemical Service outlining the French method of centralizing the gas defense subject in one department. It was suggested that a conference be held between the French Scientific Mission and all interested governmental Departments, after the approval of the Secretary of War and the Secretary of the Navy had been acquired, to take place on Thursday of this week at 9:30 A. M., if possible.

Prices—Steel.—The Chairman outlined the conference held with President Farrell of the Steel Corporation originally called to settle the matter of priority, and eventuating into a discussion as to the prices of steel for the Shipping Board, etc.

A memorandum submitted on the price question to the Secretary of War and to the Secretary of the Navy as being the sense of the conference was read, together with an answer by the Secretary of War, asking that nothing be done at present, but stating that he had informed the governmental purchasing departments that steel should be bought now at pre-war-time prices and the difference in prices adjusted at a later date. It was thereupon suggested that Mr. Scott find out what was meant by "pre-war-time prices", and that if the prices previous to the war, August 1914, was meant, that the sense of the Board was not in accord with the suggestion of the Secretary.

Shortage List—Wire Rope.—It was decided upon reading the communication addressed to Capt. Park of the Coast Artillery
332 Corps by Mr. Bolton, with a third endorsement by General Weaver, stating that nearly the entire output of the country had been preempted by the Navy Department and the War Department and by foreign requirements, that wire rope be put on the shortage list.

Committee Membership—General Munitions Board.—A communication from Dr. Hale was read asking that Dr. Marston T. Bogert, Chairman of the Chemistry Committee, be appointed a member of the Board as a representative of the National Research Council. This was acted upon favorably with the request that the resignation of Dr. Hale be not accepted and that he continue his services.

Optical Glass—Present Situation.—Mr. Scott outlined the present situation of optical glass and asked Dr. Millikan for an answer of the two questions asked of the Bureau of Standards regarding their situation on this subject. (1) Dr. Millikan stated that the Bureau of Standards has made practically no optical glass other than in an experimental way.

(2) The Bureau of Standards proposes to make between 500 to 1,500 lbs. per week, which is 1/6 of the Government's needs, and a communication from Mr. Raymond, President of the Pittsburgh Plate Glass Company, was read showing the misapprehension of that company relating to this situation.

It was decided to retain the present status quo awaiting additional information from the Bureau of Standards.

Hospital Ships.—Dr. Holcomb introduced into the meeting the need for additional hospital ships and inquired as to whether the Board should take up this subject.
333 It was decided that the question was not one in which the General Munitions Board had the right to interfere unless they were asked to do so in assisting to acquire sufficient ships for the Army and Navy.

Gun Forgings.—The following recommendations for the placing of contracts for artillery from the Committee on Army and Navy Artillery were approved:

(1) 500 3" Field guns to the Otis Elevator Co.
(2) 5,000,000 lbs. of 6" howitzers to the Standard Forgings Company.
(3) 1,000 3" Field Guns to the Chalmers Motor Co.

Gun Forgings.—A memorandum for Commander Kearney was presented relative to the recommendations which have been made for placing gun forging contracts, and stating objections made for handling the contracts in the manner recommended. This memorandum, dated June 22, was referred to the Committee on Army and Navy Artillery for report.

Payments—Quartermaster's Department.—A memorandum from Col. Hodgson, dated June 26th, relating to the reported delay in payment by the Quartermaster's Department, was presented, which brought out the fact that at present the Quartermaster's Department was up to date in payments but that previous to their present appropriation they had been slow.

A copy of this letter was ordered sent to Mr. Rosenwald.

Raw Materials—Steel.—A communication from Colonel Hodgson, dated June 26th, enclosing a copy of a letter addressed to Mr. Bonner by the Republic Iron & Steel Company relative to
334 expected shut-down for repairs in July, was presented to the Secretary, and he ordered to obtain additional information from Mr. Bonner on this subject.

Cantonment Shipments of Material.—Mr. Rogers, of the American Railway Association, reported that the material for cantonments was coming along fairly well but that there were a few questions which needed to be decided, upon which action would be taken immediately.

Prices—Antimony.—Mr. Meyer spoke of the antimony needed for bullets and stated that he would buy only spot lots at present due to the condition of the market.

The meeting adjourned at 1:15 P. M. o'clock.

H. P. Bingham, *Secretary.*

335 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Wednesday, June 27, 1917, at 8:30 a. m., in the Munsey Building**

Present: Paymaster Hancock; Colonel Hodgson; Colonel Blunt; Major Pierce; Mr. Rosenwald; Mr. Meyer; Mr. Summers; Mr. Bolton; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Clearance—Cement.—A communication from General Black, of the Engineers Corps, dated June 26th, asking for clearance on 10,000 barrels of cement, was approved.

Prices—Cotton Sheeting.—A communication from Colonel Blunt, dated June 26th, relative to target material desired by the Rock Island Arsenal, was presented and ordered referred to Mr. Eisenman for action.

Clearance—Copper, Zinc, and Lead.—A communication from Mr. Summers, dated June 25th, asking that all departments notify the Raw Materials Committee when they desire copper, zinc, or lead, was ordered received and the various departments notified, provided this had not been previously done.

Prices—10" Projectiles.—The Committee on Army and Navy Projectiles, in accordance with action of the Board, reported on the recent bids received for 10" common steel projectiles purchased by the ordnance department. This report was ordered filed.
336 *Prices—Steel.*—Mr. Scott reported that in a communication from the Secretary of War, referred to in the minutes of Tues-

day, June 25th, concerning the price at which steel could be bought, the Secretary stated that pre-war-time prices meant prior to the entry of the United States into war, and likewise that he desired this Board to get up a statement showing various prices for some time previous to April 6, 1917, to be used as a basis for fixing the tentative prices.

Prices—Cement.—A communication from Mr. Meyer, dated June 25th, giving the prices of cement for cantonments, was presented, and Mr. Meyer advised that Colonel Littell had already been advised of these prices.

Clearance—Caustic Soda.—A communication from the Committee on Chemicals, dated June 21st, relative to caustic soda desired by Italy, was presented, stating that this purchase by Italy will not affect munitions manufacturers in this country and no industries allied thereto.

This report was accepted and the Secretary ordered to notify the Italian Mission that it would be satisfactory for them to make the purchase.

Expediting—Wire.—A communication of June 25th from Colonel Hodgson stating that he had completed satisfactorily action on expediting wire for needles required by the E. D. Sudbury & Company. This was ordered accepted.

Expediting—Machinery.—A communication from Colonel Hodgson showing that arrangements had satisfactorily been made for expediting a grinder for the Watson Wagon Company was received and ordered accepted.

337 *Roofing—Method of Purchase.*—A communication of June 21st, from Mr. Meyer, relating to arrangements made by the Committee covering the above subject, was read and the Secretary ordered to notify the various departments and ask whether they will use the Committee in making their purchases.

Magnesia—Method of Purchase.—A communication of June 21st, from Mr. Meyer, relating to arrangements made by the Committee covering the purchase of the above, was read and the Secretary ordered to notify the various departments and ask whether they will use the Committee in making their purchases.

Committee Membership—Mr. L. N. Hine.—A communication from Mr. Hine was read stating that he had been called to the Ordnance Department as a specialist on certain soaps and cleaning fluids, and for that reason was forced to resign his position as an Assistant Secretary of the General Munitions Board.

Mr. Hine's resignation was accepted with instructions to express the Board's regret to Mr. Hine and likewise to notify General Crozier of Mr. Hine's activities on the Board.

Gun Forgings.—A communication from Major Crowell, relative to the fact that the Committee on Army and Navy Artillery had not as yet received specifications covering either the number or type of guns desired by the Army, was presented.

Mr. Crowell was handed a letter with instructions to take the matter up with Colonel Rice.

Gun Forgings—Reported Delay in Letting Contracts.—Major Crowell stated that the Ordnance Department has done nothing with the recommendations made by his Committee towards placing gun forgings and machining contracts with certain old and new

338 sources of supply. He stated that the Committee had been forced to use great pressure to get the Companys whom they had recommended, to agree to undertake the ordnance work, and that the present delay of the Ordnance Department was creating a decided feeling of resentment on the part of the proposed contractors.

Mr. Crowell's report on this subject was ordered referred to Colonel Blunt to take up with General Crozier. It was likewise moved and carried that the Chairman was to draft a letter to the Chief of Ordnance showing when such recommendations were made and stating that no action has as yet been taken, and also calling attention to the danger of delay. This report to be approved by the Board before submission to General Crozier.

Payments—Reported Delay.—Mr. Rosenwald was asked to confer with Mr. Clarkson relative to the publishing of certain information regarding the manner in which the Quartermaster's Department was meeting their payments.

Shipping Board—Requisitioning of Ships.—A memorandum from General Goethals was submitted to the Board for its information, asking whether the proposed action of the United States Shipping Board Emergency Fleet Corporation in requisitioning ships, etc., as outlined, would have a bad effect on the work being accomplished by the General Munitions Board.

Mr. Scott advised that he had stated to General Goethals that this would in no way have a deleterious effect on the work of the Board.

The meeting adjourned at 10:30 A. M.

H. P. Bingham, *Secretary.*

339 **Minutes of Meeting of Executive Committee of the General Munitions Board held Thursday, June 28, 1917, at 8:30 a. m., in Munsey Building**

Present: Colonel Blunt; Colonel Hodgson; Major Pierce; Paymaster Hancock; Mr. Toulmin; Mr. F. A. Scott, presiding; and Mr. H. P. Ingels, Acting secretary.

The reading of the minutes of the previous meeting was dispensed with.

Appointments.—Colonel Blunt's name was added to the Committee on Small Arms and Ammunitions, this appointment to date as of April 15, 1917.

Army Requirements—Bayonet Scabbards.—A memorandum dated June 27th, from the Chief of Ordnance regarding the proposed purchase of 1,000,000 bayonet scabbards capable of taking either the Springfield or Enfield bayonet, was presented, orders to be placed with the Jewell Belting Company of Hartford, Conn., and the Graton & Knight Company of Worcester, Mass. The Board recommends that inasmuch as the prices seem fair and just, that the orders be placed immediately with these companies.

Shortage of Abrasive Materials—Report of Colonel Blunt, dated June 27th, on this subject, was ordered received and accepted as final action.

Raw Materials—Supply of Copper, Zinc, and lead.—A memorandum dated June 27th, from Colonel Blunt, was submitted to the Board. As a result of the conflicting directions given as to the
340 proper procedure, it was ordered that the Raw Materials Committee be asked to issue explicit directions as to how they wanted to handle the above materials.

Army Requirements—Artillery.—Colonel Blunt presented an unofficial and informal report regarding the present situation of the artillery program, calling attention to the fact that it will be necessary to have an appropriation of $2,000,000 if the present and proposed new program is to be carried out.

Particular attention was called to the present difficulty in placing orders, due, first, to the necessity of advancing money for the development of plant and equipment; and, second, the present law forbids the construction of buildings for the Government on private property.

The question before the Ordnance Department is whether to spend the remainder of the present appropriation for forgings and rely on Congress appropriating moneys later for the finishing of complete guns, or to obtain the finished guns in lesser numbers by withholding some of the present appropriation to pay for the finishing of the forgings and assembling of the guns. Six to seven million dollars is now available.

Colonel Blunt stated that it was the opinion of the Ordnance Department that they should proceed with the expenditure of this money to develop capacity for forgings. Particular attention was called to the fact that even based on the present schedule there have been actual provisions made for only furnishing approximately 60% of the Army requirements of gun forgings.

341 *Army Requirements—3″ Truck Mounts—3″ Trailer Mounts.*—It is recommended by the Board that orders be placed with the New Britain Machine Company covering:

51 Anti-Aircraft Truck Mounts.
408 Trailer Mounts.

The Ordnance Department was so advised in memorandum of even date.

Reported Delay of Payments by Quartermaster's Department.—A memorandum under date of June 27th, from the Quartermaster General was submitted to the Board. Colonel Hodgson was requested to present a copy of this report to Mr. Clarkson in order that the proper publicity might be given the same.

Priority—Pierce Arrow Motor Car Company.—A letter dated June 22d, addressed to Major Drake requesting aid in obtaining delivery of certain materials necessary for the manufacture of trucks, was submitted and ordered referred to the Priority Committee for attention.

The meeting adjourned at 9:30 A. M.

H. P. Ingels, *Acting Secretary.*

342 **Minutes of Meeting of the Executive Committee of the General Munitions Board, held Friday, June 29, 1917, at 8:30 a. m., Munsey Building**

Present: General Aleshire; Colonel Blunt; Colonel Hodgson, Paymaster Hancock; Major Pierce; Mr. Rosenwald; Mr. Meyer; Mr. Toulmin; Mr. Scott, presiding; and Mr. H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting dispensed with.

Army Requirements.—Memorandum dated June 25 from Colonel Hoffer, Ordnance Department, tabulating a list of companies with whom orders had been placed for 3″ ammunition, was received and ordered filed.

Army Requirements—Ammunitions for Testing of small Arms.—Mr. Scott called attention to complaints due to defective manufacture of cartridges, that the ammunition for test purposes had been sticking in the machine guns. Colonel Blunt advised that this matter had previously had his attention. No action necessary.

Priority.—Memorandum from General Aleshire, together with copy of tentative instructions as to classification prepared by the Priority Committee, was submitted to the Board and approved.

Major Pierce takes the chair.

343 *Prices—Steel for 24,000 10″ Shells and Adaptors.*—A memorandum dated June 26th, from Colonel Hoffer, requesting the view of the Board as to whether a price of $4.50 for 100 lbs. f. o. b. is fair and just. It was moved by Mr. Meyer and duly seconded that the Board refrain from approving this price, and that a copy of the memorandum of the Secretary of War dated June 22, addressed to Mr. Scott, regarding prices of steel be sent to Colonel Hoffer for his consideration.

Priority—Delivery of 500 tons shell-loading press equipment for Frankford Arsenal.—A memorandum from Colonel Blunt recommending that an effort be made to have the Bethlehem Steel Company and its subcontractor hasten the delivery of the above equipment was presented to the Board and approved and ordered referred to the Priority Committee for attention.

Army Requirements—Lead Shrapnel Balls.—A memorandum dated June 28th regarding the qualifications of the Weidlich Bros. to manufacture lead shrapnel balls was submitted to the Board. It was recommended that papers be filed for future reference and that the Weidlich Bros. be advised to communicate with the Chief of Ordnance.

Raw Materials—Possible Shortage of Steel Bands for Oil and Water Tanks.—A memorandum dated June 25th, together with a copy of letter dated June 19th, from Black Sivalls & Bryson, of Bartlesville, Oklahoma, was presented to the Board and ordered referred to the Raw Materials Committee as a matter of record.

Apparent Shortage of Wire Rope.—A memorandum dated June 23d, addressed to the Chief of the Bureau of Ordnance, Navy, over the signature of Commander Kearney, regarding the above subject was submitted to the Board for its information. This memorandum pointed out the there was no reason for the apparent shortage in this material. No action necessary.

344 *Clearance—Optical Glass.*—As requested by Paymaster Hancock, clearance for sufficient glass for 500 binoculars was granted.

Labor—Training of Unskilled Labor for the Purpose of Shipbuilding.—A memorandum dated June 23d from Mr. Toumlin, and approved by the Board, was presented recommending that the above question be referred to the Department of Labor.

War Service Badges.—A memorandum dated June 23d, over the signature of Mr. Toulmin, together with letter dated June 21st from the Chamber of Commerce of the United States, was submitted to the Board, and it was ordered that this matter be held in abeyance for future action and memorandum returned to Mr. Toulmin.

Proposed placarding of Ships.—A report from Mr. Toulmin dated June 23d was submitted to the Board, approved, and ordered that copies be sent to the Department of the Army and Navy interested, to the Chamber of Commerce of the United States, and to the American Railway Association.

Automobile Trucks.—Memorandum dated June 21st from Mr. Bolton was submitted to the Board and handed to Colonel Hodgson with the request that he confer with the Quartermaster's Department and report back to the Board.

Naval Proving Grounds at Indian Head.—A memorandum dated June 16th, together with letter dated June 14th over the signature of W. H. VanDervoort, was submitted to the Board and referred to Paymaster Hancock for report.

Emergency Construction and Engineering Board.—A memorandum from Mr. Lundoff, dated June 14th, suggesting that an
345 emergency Construction and Engineering Board be created was read and ordered submitted to Mr. Cook for recommendation.

Army & Navy Requirements—Suggested Revisions in Paint Specifications.—A memorandum dated June 25th from Mr. Bolton regarding this subject was submitted to the Board and ordered referred to Colonel Blunt and copies sent to interested Departments.

Cantonments—Fire Hazard during period of construction.—A letter dated June 26th, from the National Board of Fire Underwriters, was submitted to the Board and referred to Colonel Littell for remarks and any action that he may see fit to take.

Emergency Construction Committee—Resignation of Mr. C. W. Lundoff.—Mr. Lundoff's resignation, dated June 27th, was accepted. Letter of June 29th to Mr. Lundoff from the Chairman of the General Munitions Board was also read.

Clearance—20,000 ft. Quarter-Sawed Poplar.—As requested by the Signal Corps, the Board granted clearance this day on 20,000 ft. of quarter-sawed poplar one inch and up thick, 12 inches and up wide.

Reports—Committee on Army and Navy Artillery.—A report dated June 26th received by the Board from the above Committee and copy ordered sent to Major Pierce.

Appointment—Storage Committee.—As requested by Mr. Cook, Mr. H. H. Titsworth's appointment as a member of the above committee was approved. It was ordered that Mr. Cook's attention be called to the recent ruling of the Board, viz, that no new members be added to committees without first obtaining the approval of the Board.

National Guard Cantonments.—(*a*) For the information of the Board, copies of telegram dated June 27th, advising the Commanding General of the southeastern department, the west-
346 ern department, and the southern department to proceed to lease cantonment sites when ready.

(*b*) Fayetteville, N. C., was reported as a site for National Guard Cantonment.

Cantonments—Des Moines, Iowa.—For the information of the Board, telegram dated June 27th, addressed to the Commanding Officer of the Central Department, Chicago, was read advising that the Department would adhere to its selection of Des Moines as a cantonment site.

Committee on Navigation and Nautical Instruments.—Recommendations made by the Committee, dated June 26th, were submitted to the Board and ordered referred to Paymaster Hancock for report.

Trawlers—For British Admiralty.—A letter dated June 27th, from General Goethals, addressed to Mr. Scott, together with a copy of a letter dated June 27th, addressed to Major General G. W. Goethals, signed by T. Royden, requesting permission to place an order for the construction in this country of 24 trawlers for mine sweeping was presented to the Board and ordered referred to the Council of National Defense.

Raw Materials—Lead.—Mr. Meyer discussed the question of lead requirements with the Frankford Arsenal, stating unofficially that he was under the impression that all requirements can be cared for out of the 8,000 tons of pig lead which has already been arranged for.

Mr. Meyer was requested by the Board to submit a definite memorandum covering the lead situation, at the next meeting.

Primary Examiners' Advisory Committee.—Several memoranda from the Primary Examiners' Advisory Committee, together with copy of the proposed bill to be submitted to Congress, said bill to prevent the publication of inventions which might be detrimental to the public safety were submitted to the Board and ap-
347 proved, providing an additional clause be added to the bill protecting the inventor in case his invention is used by another during the interim between the allowance of the application and the actual publication of it. This matter was ordered referred to Mr. Toulmin for his attention.

Priority—Plates for the Utah Power and Light Company.—The question of Priority of shipment of plates for the above company, ordered from the Carnegie Steel Company, was ordered referred to General Aleshire.

Labor.—Request for aid in handling the labor situation was submitted to the Board from the following:

Dubois Foundry Company.
American Hoist & Derrick Co.
Topham's.
Chester Steel Castings Co.

This matter was referred to the Council of National Defense.

Raw Materials—Price of Steel.—At the request of Mr. Meyer, the following table of average prices of steel as taken from the Iron Age, July 1914, to April 1917, inclusive, was submitted to the Board for its information and consideration:

Bessemer Billets—average price from July 1914–April 1917, $34.70 per ton.

Tank Plates—Average price—same period of time, $56.19 per ton.

348 *Raw Materials—Coal: As affecting the Seneca Falls Mfg. Company.*—A memorandum dated June 27th, from Lt. Col. Wallace regarding the apparent inability of the Empire Gas & Electric Co. to procure sufficient bituminous coal, was submitted to the Board and ordered referred to Mr. Peabody of the Coal Committee.

Raw Materials—Lumber for Aeroplanes.—A report from the Military Intelligence Section, Department of Justice, dated June 1st, in regard to the preference shown the United States, was submitted to the Board and ordered referred to the Lumber Committee for any action that they may deem fit to take.

Committee on Emergency Construction—Coordinating Government Building Programme.—A memorandum dated June 26th, from Mr. Starrett, was submitted to the Board and ordered that copies be sent to the various departments interested for report as to the amount of work under contract in the various departments, length of time necessary for completing these contracts, and firms with whom contracts are placed.

Copper.—Memorandum from the Quartermaster's Corps, dated June 26th, giving the approximate requirements of copper at New York and San Francisco Depots, was submitted to the Board and ordered referred to the Raw Materials Committee.

Accountancy.—Memorandum dated June 23d, from the Accountancy Committee, recommending qualified accountants in San Francisco, was submitted to the Board and ordered transmitted to the Bureau of Steam Engineering.

Industrial Efficiency.—Letter dated June 14th, addressed to Mr. Scott, over the signature of H. W. Woodward, was received and ordered filed.

349 *New Jersey State Gas Association—Reserving Eligibles for Industrial Services.*—A letter dated June 1st regarding the above was submitted to the Board and ordered referred to Colonel Hoffer at the Ordnance Department.

Public Announcement of Government Contracts.—A letter dated June 22, from Mr. A. N. Van Deman, addressed to the Secretary of War, was submitted and ordered filed.

Bethlehem Steel Co.—Report from Bureau of Supplies & Accounts.—A memorandum dated June 23d, to Paymaster Hancock, over the signature of Mr. C. P. Auld, Bureau of Supplies & Accounts, was ordered received and transmitted to the interested committee.

Colt Patent Fire Arms Company.—A report from Aberthaw Construction Company of Boston, under date of June 26th, was submitted to the Board and ordered filed.

Raw Materials—Specifications for Spelter.—A memorandum dated June 26th, addressed to the Committee on Raw Materials, over the signature of Lt. Col. Hoffer, was submitted to the Board and ordered filed.

Colonel Blunt was handed the original by Mr. Summers.

The meeting adjourned at 11:10 A. M.

H. P. Ingels, *Asst. Secretary.*

350 Minutes of Meeting of the Executive Commitee, General Munitions Board, held Monday, July 2, 1917, at 8:30 A. M., Munsey Building

Present: Colonel Blunt; Colonel Hodgson; Major Pierce; Dr. Simpson; Paymaster Hancock; Mr. Meyer; Mr. F. A. Scott presiding; and H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Appointments.—Mr. Henry Diegel's appointment to the Leather Committee was approved by the Board with the understanding that a memorandum would be addressed to the Council of National Defense asking the establishment of the general policy relating to such appointments.

Raw Materials—Price of Steel.—A communication from Cordley & Hays regarding their requirements of pickled steel bands was presented to the Board and action thereon deferred pending the settlement of the general question of steel prices.

Army Requirements—Effect of 8-Hour Law on Production.—The case of the United Engineering and Foundry Company was again brought to the attention of the Board. Correspondence, together with excerpts from the Council minutes of June 27th, referred to Colonel Blunt.

Army Requirements.—After investigation it is the opinion of the Board that the prices are fair and just and that there is no reason why the following orders should not be placed:

351 (a) DuPont Powder Company, Approximately 5,826,000 Lbs. powder, 60¢; 3,000,000 Lbs. powder, 63¢.

(b) Order #2 Division E. L., dated June 25th, placed with the England, Walton Co., Philadelphia.

(c) Order #1 Division E. L., dated June 25th, placed with W. D. Byron & Sons, Inc., Williamsport, Md.

Army Requirements.—The General Munitions Board concurs in the recommendations of the Army and Navy Artillery Committee that orders be placed with the following:

J. G. Brill Company, 200 4.7″ gun carriages.

Heppenstall Forge & Knife Co., 3 & 4.7″ Gun Forgings.

The Bucyrus Company, 1,000, 3″ Field Guns.

American Brake Shoe & Foundry Co., 3,000, 6″ Howitzers.

Erie Forge Company, Erie, Pa., Forgings for 4″, 50-calibre guns, 5,000,000 lbs.

Walter Scott & Co., 250, 4.7″ Gun Carriages.

In accordance with memorandum dated June 28th, from Col. J. H. Rice, the Board concurs in the above recommendations, pending Colonel Blunt's approval of details.

Mr. Scott called particular attention to the fact that he has no connection with the Walter Scott Co.

Automobile Trucks.—Photostat Copies of bids submitted for automobile trucks, attention being called to the approval of the Quartermaster Dept. of 16 types of trucks. It is the opinion of the Board that no action should be taken unless especially requested by the

Quartermaster Department. This matter was referred to Colonel Hodgson.

Clearance.—Clearance was granted the following:

(a) 1,000 yds. Tubular Woven Fabric for sword scabbard cover for the Rock Island Arsenal. Tubular Woven Fabric Co.

(b) 285,000 yds. 2″ 2⅞-ounce olive-drab webbing for Rock Island Arsenal. Wellington Sears & Co.

352 These were in accordance with memoranda dated June 27th, over the signature of Colonel E. B. Babbit.

Drill Guns.—A memorandum from Colonel Blunt, dated June 30th, together with letter from the Nutmeg State Wooden Gun Company, was received and ordered filed.

General Orders from Council of National Defense.—General Order #16 regarding individuals and missions sent abroad was submitted to the Board and ordered filed.

Public Ownership.—Letter dated June 25th, over the signature of Albert M. Todd was submitted to the Board and ordered referred to the Intelligence Department of the Army for attention.

Labor—Approval of Contracts with reference to provisions respecting Labor.—A memorandum dated June 27th, over the signature of the Secretary of War, was received, noted, and ordered filed.

Communication from Mr. Keppel of the War Dept., June 28, 1917.—A communication from the above was received and considered by the Board. No action taken.

Clearance.—As requested by Paymaster Hancock, clearance was granted on the following articles:

(a) Lumber for Mare Island covered by Req. #967, cleared subject to approval of the Lumber Committee.

(b) 25,000,000 lbs. smokeless powder as covered by Bureau of Ordnance Req. #157 and 158.

(c) 350 Lewis Machine guns and parts, covered by Ordnance Req. #193.

353 *Raw Materials—Requirements of Ordnance Department of the Army.*—Mr. Meyer, representing the Raw Materials Committee, stated that the handling of raw materials for work on contracts for the Ordnance Department was creating a very considerable additional amount of work for the Ordnance Department, and for the Raw Materials Division.

Offers of materials obtained through the trade committee were being made and accepted by the Department. Subsequently, the transaction as offered by the Trade Committee was divided up among a number of material contractors on the one hand and the Government manufacturing contractors on the other hand.

Mr. Meyer stated that if the requirements of the Ordnance Department could be centralized through one officer, it would lessen the details in the Department and very much simplify the work as now being thrown upon the trade committee and which contributes to delay in obtaining the needed articles.

Mr. Meyer was requested by the Committee to confer with the Chief of Ordnance with a view to arranging methods of handling the business in the most expeditious manner, and with a view to facilitating the work of the Ordnance Department.

The meeting adjourned at 10:20 a. m.

H. P. Ingels, *Acting Secretary.*

354 Minutes of Meeting of the General Munitions Board held Tuesday, July 3, 1917, at 11 a. m., Munsey Building

Present: General Cruse; General Aleshire; Major Wallace; Colonel Blunt; Colonel Dunn; Colonel Hodgson; Dr. Simpson; Colonel Lemley; Mr. Toumlin; Admiral Zane; Admiral Capps; Commander Kearney, Commander Leigh; Mr. Eisenman; Mr. Gifford; Mr. Meyer; Mr. Zimmerschied; Mr. F. A. Scott, presiding; and Mr. H. P. Ingels, Acting Secretary.

The reading of the Minutes of the previous meeting was dispensed with.

Emergency Construction and Engineering Board.—A memorandum from Mr. C. W. Lundoff, together with memorandum dated July 2, 1917, from Mr. Cook, Chairman of the Storage Committee, was submitted to the Board.

In view of the fact that the constructive work of the Committee on Emergency Construction is practically finished, it was moved by Colonel Hodgson, and duly seconded, that the Committee on Emergency Construction be authorized to cooperate with the Storage Committee and the Storage Department of the Army and Navy.

General Cruse called attention to the effective work done and the great assistance rendered his Department by the Emergency Construction Committee, stating that he certainly hoped that this committee would be held intact and the good work continued.

355 *Army Requirements—Forgings, Gauges, etc.*—Recommendations of the Committee on Army and Navy Artillery that contracts be placed with the following companies:

J. G. Brill & Company, Philadelphia.
Heppenstahl Forge & Knife Co.
Bucurus Company.
American Brake Shoe & Foundry Co.
Erie Forge Company (2 contracts).

The Board sees no reason why the above orders should not be placed. These same contracts were submitted to the Board on July 2nd and were at that time referred to Colonel Blunt, with the understanding that the Board concurred in the recommendations subject to his approval of the details.

Prices—Cement.—A memorandum dated July 3d from Mr. Meyer calling attention to the following bids received by the Chief of Engineers for 14,000 barrels of cement:

$2.18 per barrel.
1.90 " "
2.24 " "
2.24 " "

The offer from the Chairman of the Cement Committee was $1.78 per barrel. This memorandum was ordered received. No action taken.

Departmental Cost Conference.—A letter from Hon. William Redfield, Secretary of Commerce, was submitted to the Board, regarding the meeting of the Departmental Cost conference to be held July 5, 1917, at 10 A. M., in Room 709, Commerce Building.

By action of the Board Mr. A. W. Teel and Mr. J. E. Sterrett of the Accountancy Committee were requested to attend this meeting.

356 *Committee on Navigation and Nautical Instruments.*—Memorandum dated July 3d from the National Research Council, advising that the following men had been appointed as members of the above committee, was ordered received: Dr. L. A. Bauer, Commander J. S. Doddridge, Mr. R. L. Faris, Mr. Roy L. Ferner.

Cooperative Inspection of Munitions.—Memorandum dated June 20th from the National Research Council was submitted to the Board and referred to Colonel Dunn for his attention.

Commandeering of Ships—E. I. Du Pont De Nemours & Co.—Letter dated July 18th from the above company was submitted to the Board and ordered referred to Colonel Blunt and Commander Kearney with a request for recommendations in the premises.

Army Requirements.—Deeming the prices fair and just, the Board sees no reason why the following orders, as covered by memoranda from the Ordnance Department as given below, should not be placed:

(*a*) Walter Scott & Co., 250 4.7" Gun Carriages, Memo June 30, 1917.
(*b*) John H. Meyer & Co., Olive Drab Duck, Memo July 2, 1917.
(*c*) Canteen Covers, haversacks, and pack carriers, Memo June 29, 1917.
(*d*) Rifle Dotters to be furnished by the Hallifield Target Practise Company as per memorandum of June 28, 1917, from Col. Thompson.

All of the above papers were handed to Colonel Blunt for his attention.

357 *General Munitions Board—Policy.*—Director Gifford, of the Council of National Defense, appeared before the Board and made a statement with respect to a certain letter addressed to him by the Secretary of War as Chairman of the Council, said letter dealing with certain actions of the Coal Committee, and with the limitations under the law of the committees and members of the Council of National Defense.

Mr. Gifford stated that he had directed an inquiry to the Secretary of War, to which he had not as yet received a response, as to whether it was the intention to notify the committees of the Council that such committees should not in any way discuss the subject of prices to the civilian population, but that outside of this one topic they are free to proceed as at present, to frankly discuss matters with the trades and industries, and report thereon in the way of advice to the Departments of the Government.

Mr. Gifford stated that he had not as yet received a formal response to his inquiry, but that Secretary Baker had told him personally that it was his desire and intention that the committees of the General Munitions Board should proceed with their work as at present.

Trucks—standardized truck situation.—Mr. Zimmerschied, Vice Chairman of the Automotive Committee, made a statement to the Board relative to the work of the Committee and certain officers of the Quartermaster General's Department, in the preparation of designs for a standardized army truck. The subject was discussed at some length by the members of the Board, the opinion being expressed that it is unlikely that the proposed standardized truck
358 can be manufactured in quantity in time to meet the motor-truck requirements of the Army by the Spring of 1918. Mr. Zimmerschied stated that he shared this view and that it was his opinion that the work of preparing the standardized truck should proceed with all possible speed, but that the Quartermaster General should take steps to assure the manufacture of a sufficient number of standardized trucks, of designs satisfactory to the Army, to be ready for service between the present date and Spring of 1918.

The meeting adjourned at 12:45 o'clock P. M.

H. P. INGELS, *Assistant Secretary.*

359 Minutes of Meeting of Executive Committee of the General Munitions Board held Thursday, July 5, 1917, at 8:30 a. m., in the Munsey Building

Present: Mr. Scott; Colonel Hodgson; Major Pierce; Commander Parsons; Mr. Summers; Mr. Meyer; Mr. Scott, Presiding; and Mr. H. A. Toulmin, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Invitation to attend Meeting from the Labor Section of the Council.—An invitation was received from the Labor Section of the Council, directed to the General Munitions Board, suggesting that someone representing the General Munitions Board be present at a conference to consider the movement of labor, etc. Colonel Blunt was appointed as the representative of the General Munitions Board to attend the meeting.

Standardization.—Mr. Scott presented a report from Lt. Colonel Hoffer on the subject of certain changes in specifications as to material falling within the purview of Colonel Hoffer's Department, which changes are made in order to facilitate manufacture without lowering in any way the standards of the Ordnance Department.

Mr. Scott stated that it had been the endeavor of the Munitions Standards Board to encourage and quicken changes in specifications under present conditions, and to make them more liberal whenever it was possible to do so to suit the manufacturing conditions, without any lowering of standards.

360 It was emphasized that there was no lowering of standards, but that these changes in specifications were largely due to experience derived by this country during the last few years in the manufacture of munitions for war.

The Ordnance Department has maintained very rigid standards and will continue to do so. The result has been that the output of the Ordnance Department has compared very favorably with the output of private concerns, and has shown superiority generally over the products of other nations. This adherence to standards has also resulted in increasing the accuracy of outside manufacturers.

2,000-Ton Press for Spain.—A communication was presented from the assistant Secretary of State in regard to a 2,000-ton press for Spain. The matter was referred to Major Van Deman for his advice as to whether or not it would be advisable to permit this shipment.

Clifton Mfg. Company.—The Clifton Manufacturing Company inquired about the subject of whether or not a cotton mill with whom they had been doing business was justified in refusing to deliver under a contract with the Clifton Manufacturing Co. It was ordered that this correspondence should be submitted to the Priority Committee for investigation by wire, with a request to report the result of the investigation to the Board.

Cantonment Work—Lead.—A communication was presented from Colonel Littell in regard to the clearance of quantity of lead. This matter was referred to the Raw Materials Committee for action as to whether or not the same should be cleared.

361 *American Railway Association—Shipments to Cantonments.*—A letter from the American Railway Association was presented regarding the regulation of shipments of freight in connection with cantonment construction, and ordered referred to the Emergency Construction Committee for whatever comment they wish to make.

Payments on Cantonment Constructions.—A communication from Colonel Littell on the subject of payments for cantonment construction was received. It was directed that this letter be forwarded to Mr. Clarkson with the request that a news item be made of it for the information of the public.

Meeting of Cost Accountants of the Department of Commerce.—Mr. Scott called attention to the meeting of the Cost Accountants of the Department of Commerce, arranged by the Secretary of the Department of Commerce. It was stated that representatives from the General Munitions Board would attend.

Clearance—Optical Glass.—Commander Parson presented a request from the Navy for clearance on glass to be used for bore sight telescopes for the Navy, to be purchased from the Winchester Arms Company.

Clearance was approved.

Clearance—Leather.—Clearance was granted on the orders mentioned in the communication of the Chief of Ordnance of June 28th and 29th dealing with leather, all of which communications are attached to these minutes. Same was approved and ordered cleared by the Board.

Clearance—Gun Carriages.—Proposals for the manufacture of 8″ carriages mentioned in the letter of July 2, 1917, from the Chief of Ordnance were ordered cleared.

362 *Clearance—Olive Drab Webbing.*—Clearance was ordered of the requirements for olive drab webbing as outlined in the communication from the Chief of Ordnance under date of July 2, 1917.

Clearance—Knife Plate Steel.—Clearance was ordered of the material for knife plate steel mentioned in letter of July 3, 1917, from the Chief of Ordnance.

Clearance—Cotton Duck.—Clearance on cotton duck, in accordance with communication of July 2nd, from the Chief of Ordnance, was ordered.

Clearance—Cotton Covers, Haversacks and Pack carriers.—Communication from the Chief of Ordnance in regard to material for cotton covers, haversacks, and pack carriers, dated June 29th, was received, the prices approved, and the material ordered cleared.

Clearance—Rifle Dotters.—A communication from Col. Thompson of the Ordnance Department in regard to rifle dotters, stating the price of these dotters, was read and the price approved as fair and just.

Clearance—Steel Helmet Blanks.—Clearance was ordered for 5,000 manganese steel helmet blanks in accordance with communication from the Chief of Ordnance under date of July 1st.

Clearance—Gun Carriages.—Clearance was ordered of 250 gun carriages mentioned in communication of June 30th, from the Chief of Ordnance, and price approved as being fair and just.

Clearance—67,000 Haversacks.—Clearance was ordered of the 67,000 haversacks mentioned in communication from the Chief of Ordnance which is attached to these minutes. The price mentioned therein was approved as fair and just.

363 *Clearance—Lead.*—A communication was received from the Chief Signal Officer in regard to the clearance of a quantity of lead. This matter was referred to the Raw Materials Committee for action as to whether or not such lead should be cleared.

The meeting adjourned at 10 A. M.

H. A. Toulmin, *Acting Secretary.*

364 Minutes of Meeting of Executive Committee of the General Munitions Board held Friday, July 6, 1917, at 8:30 a. m., Munsey Building

Present: Major Pierce; Colonel Hodgson; Colonel Blunt; Mr. Meyer; Mr. Summers; Mr. F. A. Scott, presiding; and Mr. H. P. Bingham.

The reading of the minutes of the previous meeting was dispensed with.

Shells—3″ Loading.—A communication from Colonel Dunn, dated July 5th, was read relative to the action of the Public Safety Committee of Lynnhurst, N. J., requesting that the loading plant of the Canadian Car and Foundry Company at Kingsland, which has been leased to Jos. A. Evans for the purpose of reestablishing a loading plant for 3″ shells to undertake a Government order, be put under the direct supervision of a Government official for the reason of safety.

Proposed drafts of letters to be sent to the Chairman of the State Council of National Defense of New Jersey, and to the Commissioners of the Township of Lynnhurst, were approved with minor changes, and ordered sent to these persons.

Donation—Fighting Unit.—In connection with the offer of the Sherwin Williams Company, by Mr. Martin, to donate a fighting unit to the Government, a letter was drafted for submission to Mr. Martin declining the offer and ordered sent, the reason for

365 the nonacceptance of this offer being due to governmental policy.

Optical Glass—Field Glass for Signal Corps.—A communication of July 3d, from the Signal Corps, relative to their desire to purchase 20,000 type "EE" field glasses, and their inability to locate a source of supply, was presented and it was ordered that a list of manufacturers of this article be submitted to the Signal Corps with a request that they get in touch with such manufacturers, taking particular note of the date of deliveries when placing orders.

Machine Guns for Aircraft Production Board.—A communication of July 3d, from Mr. H. E. Coffin relating to the immediate need for the development of additional facilities for the manufacture of machine guns, was presented and ordered referred to Colonel Blunt for submission to General Crozier, with a request that he ask for

sufficient data as to actions already taken along this line, in order that a reply might be made to Mr. Coffin.

Zinc—New Specifications from Ordnance Department.—A communication from Mr. Meyer, dated July 2d, was presented stating that Mr. Palmer, Chairman of the Zinc Committee, while not willing to take any responsibility in connection with the new zinc specifications said that zinc ordered from the amended specifications will be obtainable at a lower price than Grade "A" Zinc. This communication was ordered received.

Shipping—Possible Requisitioning of Certain Barges.—A communication from the Du Pont Company, dated June 29th relative to the above subject, was ordered referred to Colonel Blunt.

Steel—Price and Policy.—A letter dated July 5th, jointly from Mr. Scott and Mr. Baruch, addressed to the Secretary of War bearing on the above subject, was read and the immediate necessity for some action was agreed to by the Board. All correspondence
366 relative to this matter was ordered attached to the minutes.

Steel for 3" Shells and Shrapnel.—In view of a reported lack of information in the hands of the Ordnance Department relative to the allotment of steel to the various steel companies for the manufacture of the 9,000,000 3" shrapnel and shell forgings, a memorandum dated July 5th, from Mr. Bonner, showing that the Ordnance Department had been advised on June 20th, of the allotment, was presented and ordered filed.

Labor.—Colonel Blunt reported that in line with suggestion of the Board he had attended a labor conference held yesterday and that no definite action had been taken regarding labor in that meeting.

Chemicals—Price of Powder from Du Pont.—A communication dated June 30th, from General Crozier correcting prices of powder sent us on April 21st, was presented and ordered filed.

Steel—Price for Sheet Steel for Bacon Cans.—A communication from the Ordnance Department asking for confirmation of price received on sheet steel for bacon cans, was presented to the Board and prices therein confirmed.

Army Requirements—Ranges.—A communication dated July 3d, from The Fox Furnace Company, complaining of the treatment received at the hands of the Quartermaster Department, was read and referred to Colonel Hodgson to take the matter up with Capt. Tripp of the Quartermaster Department.

The meeting adjourned at 10:30 A. M.

H. P. Bingham, *Secretary.*

367 **Minutes of Meeting of Executive Committee General Munitions Board held Saturday, July 7, 1917, at 8:30 A. M., Munsey Building**

There were present: Colonel Blunt; Colonel Hodgson; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Duck.—Prices were confirmed covering material desired by the Ordnance Department, as per following communications:

July 3, 1917, Cleaning Rod cases and purches.

July 5, 1917, Canteen Covers.

Leather—Prices.—Prices were confirmed on leather covered by communications from the Ordnance Department as follows:

July 2, 1917,	Order	#E.L.—16
July 2, 1917,	"	#E.L.—15
July 2, 1917,	"	#E.L.—14
July 2, 1917,	"	#E.L.—13
July 2, 1917,	"	#E.L.—12
July 2, 1917,	"	#E.L.—11

Magnesia—Not required by Ordnance Department.—Referring to a communication of June 27th, relative to the need for magnesia by the Ordnance Department and the method of purchase, this department reported that they will not place orders for this material.

Steel—Request for Band Steel for Cordley & Hayes.—A communication from Colonel Hodgson, dated July 6th, attaching correspondence relative to the above subject was presented to the Board showing that this matter had been satisfactorily attended to. Ordered filed.

368 *Steel—For Marine Corps.*—A communication from the Marine Corps, dated July 3, 1917, asking for confirmation of prices received on 140 lbs. of galvanized sheet steel, was reported on by Colonel Hodgson to the effect that the amount was so small that the prices quoted should be accepted, due to the evident need for the material, and further relative to their question as to whether pre-wartime prices referred to in the letter of the Secretary of War, dated June 22, bearing on the steel-price situation referred to galvanized sheet.

The Board instructed that Colonel Lemly be asked to obtain such information from the proper authorities of the Navy.

Shipping—Prices for Barge.—An indorsement from the Chief of Engineers, asking for assistance in obtaining more favorable prices on a barge desired by the Engineer Corps, was presented, and the Secretary instructed to ask Admiral Rousseau whether the prices quoted the Engineer Corps were not based on the present price of steel, and if such is the case, the matter must be held in abeyance until the final price of steel to be purchased by the Government is adjusted.

Labor—Letter from Frick Co.—A communication from the Frick Company, relative to high wages that were being paid in their vicinity was presented to the board and ordered referred to Colonel Blunt to ascertain from the Ordnance Department whether the Morgan Engineering Company and the Westinghouse Machine & Electric Company were executing contracts for the Government on a cost-plus basis.

Exhibition—Government Material.—A communication from the Committee on Supplies, together with a letter of June 28th, from the Chamber of Commerce of the United States of America, relative to the advisability of establishing an exhibition of all ma-
369 terials being purchased by the Government, was presented and ordered referred to Colonel Hodgson.

30673—36—No. 6——12

Lumber—Oil—Amounts needing Clearance.—An indorsement from the Engineer Corps, dated July 3d (on communication of May 26th, 106.074/119), asking for the quantities needing clearance on oil and lumber, was presented and ordered referred to the Lumber Committee and Oil Committee for advice.

The meeting adjourned at 9:30 A. M.

H. P. BINGHAM, *Secretary.*

370 **Minutes of Meeting of Executive Committee General Munitions Board held Monday, July 9, 1917, at 8:30 a. m., Munsey Building**

There were present: Major Pierce, Colonel Blunt, Colonel Hodgson, Mr. Rosenwald, Colonel Blunt, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Expediting—Ball Bearings for British.—A letter from Mr. C. J. Phillips, representative of the British Munitions Board, asking for assistance in expediting the delivery of certain ball bearings ordered from the Fafnir Bearing Company, was presented and the Secretary was instructed to communicate with the Fafnir Company asking them to expedite such shipments.

Lead—Clearance for Signal Corps.—A memorandum from the Raw Materials Committee advising that clearance be given the Signal Corps on the 100 tons of lead referred to in their memorandum of June 30th was presented and clearance confirmed:

Lead—Clearance for Quartermaster Corps in charge of Cantonment Construction.—A memorandum of July 5th from the Raw Materials Committee authorizing that the 800 tons of lead inquired for by the above Department on June 28th be cleared was presented and clearance confirmed.

371 *Lumber—Clearance.*—A communication of July 7th from the Marine Corps 27678—26527 inquiring for clearance on certain lumber as listed, was presented and ordered referred to the Lumber Committee for their action.

Steel—Wrenches—Neff Hardware Company.—A communication from the Neff Hardware Company dated July 2nd relative to cancellation of contract for wrenches by Smith & Hemmenway Company, was presented and ordered referred to the Priority Committee for their investigation and action.

Steel—Small tools and spring steel.—A communication from Depot Quartermaster, Sam Houston, dated June 27th relative to their requirements for small tools and spring steel, asking if any arrangements had been made with the Cleveland Twist Drill Company or the Standard Tool Company, was presented and referred to Col. Hodgson for investigation and report.

Labor—Wages—Frick Company.—A letter of June 30th from the Frick Company in connection with wages being paid by the Morgan Engineering Company and the Westinghouse Machine & Electric Company which was referred to Col. Blunt, was presented and Col. Blunt reported that the Morgan and Westinghouse Companies have no cost-plus contracts. The Secretary was instructed to write to the Frick Company stating that the above companies have no Government contracts and that therefore this Board can do nothing.

General Munitions Board—Chairman for General Meeting.—The Secretary was instructed to communicate with Admiral Capps and ask him to serve as Chairman of the General Munitions Board meeting to be held at 10 A. M. Tuesday, July 10th.

372 *Steel—Prices.*—Prices were confirmed on the following:

1. Memorandum July 9th from the Ordnance Department—condiment cans No. E. A. 7.

2. Memorandum July 9th from the Ordnance Department—extra parts for condiment cans No. E. A. 8.

The meeting adjourned at 9:20 A. M.

H. P. BINGHAM, *Secretary.*

373 **Minutes of Meeting of the General Munitions Board held Tuesday, July 10, 1917, at 11 a. m., Munsey Building**

Present: General Cruse; General Aleshire; Admiral Zane; Major Kelley; Major Brown; Commander Leigh; Commander Kearney; Admiral Rousseau; Mr. Bolton; Colonel Blunt; Colonel Hodgson; Lt. Col. Lemly; Colonel Fisher; Mr. Meyer; Mr. Howe; Mr. Swimmershied; Mr. Toulmin; Mr. Ingels; Admiral Rousseau, presiding; and Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Priority—Committee Membership—Mr. Rodgers.—In accordance with a request of General Aleshire, dated July 6th, Mr. J. G. Rodgers was confirmed as a member of the Priority Committee.

Medical Supplies—Form of Contract.—A contract form prepared by the Legal Committee of this Board with the advice of the Accountancy Committee and Mr. Lippman of the office of the Secretary of War, was presented to be used for the purchase of surgical supplies for the Army and the Navy. The approval of Col. Fisher of the Medical Corps of the Army for the Surgeon General dated July 3d, was presented and thereupon the Board approved this form of contract for the army.

374 A communication dated June 28th, from Dr. Holcomb of the Navy calling attention to certain modifications that should be made to comply with the Navy requirements, and asking that the form be submitted to Paymaster Hancock, was presented and before any action is taken by the Board relative to the Navy, it was ordered that Paymaster Hancock's advices should be received.

Optical Glass—French Experts.—A communication dated July 7th, over the signature of Dr. R. A. Millikan, was presented, suggesting that experts from the Parra-Mantois & Company, of Paris, be secured to assist in the manufacture of optical glass in this country. This communication was ordered referred to the Bureau of Standards for their action.

Labor—Glass Manufacturers—August Shut-down.—A communication dated July 7th (File S. 14101/91), from Colonel Fisher for the Surgeon General, relative to the usual August shut-down of glass manufacturers and the present shortage of glass, was presented and ordered referred to the Council of National Defense for attention,

with the recommendation of the Surgeon General concurred in by the Board.

Lumber—Clearance—Engineer's Corps.—Acting upon the advice of the Lumber Committee, submitted under date of July 9th, clearance was confirmed on lumber desired by the Engineer's Corps for the Monongahela River locks and dams (#106.074/121).

Trucks—Shortage of.—It was moved and carried that trucks be added to the list of materials on which a shortage exists or is probable. A completed list was read.

Labor—Chilean Labor in our Munitions Factories.—A communication dated July 9th, from the Director, attaching a request
375 from the Chilean Ambassador relative to allowing Chilean workmen enter our munition factories, was presented and the Secretary ordered to notify the director that this matter did not come within the province of the Munitions Board, but should be handled by the War Department.

Copper.—Mr. Meyer stated verbally that the 60,000,000 pounds of copper arranged for by the Copper Committee for the use of the Ordnance Department, at a price of 25¢, while having been recommended by the Munitions Board and accepted by the Ordnance Department at a price, has been disapproved by the Secretary of War and that the copper situation was again uncertain.

After some discussion a motion was moved and carried that Mr. Scott be asked to confer with the Secretary of War informally on this subject, and if possible obtain the wishes of the Secretary of War as to what further action the Munitions Board or the Raw Materials Committee should take.

Special Meeting.—It was moved by Mr. Howe, duly seconded and carried, that Lord Nordcliff be asked to address the General Munitions Board, and it was requested that Mr. Scott arrange for this conference.

The meeting adjourned at 12:15 p. m.

H. P. Bingham, *Secretary.*

376 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Wednesday, July 11, 1917, at 8:30 a. m., Munsey Building**

Present: Colonel Blunt; Colonel Hodgson; Mr. Rosenwald; Mr. Meyer; Mr. Bolton; Colonel Blunt, presiding; and Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Duck—Clearance.—A communication under date of July 9th, from the Ordnance Department, was presented asking for the approval of prices in the following articles:

1. Hand-ax Carriers—Order # E. X.–15.
2. Shovel Carriers—Order # E. X.–16.

The prices were approved by the Board and the Ordnance Department was ordered to be so advised.

Shipping—Commandeering of Ships.—A communication of June 18th, from the DuPont Company, relative to the possible requisitioning of nitrate ships by the Government, which subject had been

referred to a committee of the Board, was reported on by this Committee and the matter ordered referred to the Council of National Defense with a recommendation that in the opinion of this Board such requisitioning was inadvisable, but that the Munitions Board had no authority in this matter.

377 *Shipping—Requisitioning of Barges—DuPont.*—A communication from the DuPont Company relative to the possible requisitioning by the Government of certain barges needed by the DuPont Company was reported on by Colonel Blunt, who had taken the matter up with Commander Kearney, and the Secretary was ordered to advise the DuPont Company that the Norfolk Navy Yard had been instructed by the Secretary of the Navy that no further action looking to taking of the barges referred to would be taken.

Duck—Ordnance Department Requirements and Orders Placed.—A communication from the Ordnance Department dated July 9th, covering the requirements for duck and webbing to June 30, 1918, together with orders placed, was submitted and referred to Mr. Eisenman for his information.

Iron—Bessemer Pig Iron Desired by the Watertown Arsenal.—A communication of July 6th, from the Chief of Ordnance, relative to prices received by the Watertown Arsenal for their requirements of High Silicon Bessemer Pig Iron, was presented and ordered referred to the Raw Materials Committee.

Charcoal—Governmental Needs of.—A communication of July 10th, from the Director, attaching communication from the Chattanooga Manufacturers Association, referred by the Secretary of Commerce bearing on the above subject, was ordered referred to Dr. Simpson for attention.

Woolen Goods.—A communication from the Quartermaster General of the Army (423.1/147(G.M.), dated July 7th, relative to a communication from the Hon. Steenerson, House of Representatives, and a communication from Mr. O. Furuseth, relating to cer-
378 tain losses of commissions from the sale of woolen goods because of the requisitioning of factories by the Government, was ordered referred to the Council of National Defense inasmuch as the General Munitions Board has no authority in this matter as the question is one of wide policy.

Postal Rates to France.—A communication from Mr. Otto E. Bruder, addressed to the Secretary of War, relative to the above subject, referred to the General Munitions Board by the Quartermaster General, was presented and ordered referred to the Postmaster General.

The meeting adjourned at 9:45 A. M.

H. P. Bingham, *Secretary.*

379 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Thursday, July 12, 1917, at 9 o'clock A. M., Munsey Building**

Present: Colonel Blunt; Colonel Hodgson; Major Pierce; Dr. Simpson; Mr. Rosenwald; Mr. Meyer; Mr. Summers; Mr. Bolton; Mr. Scott; Colonel Blunt, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Shells—3" Loading.—A communication dated July 10th, from the Township clerk, Township of Lyndhurst, relative to opposition which the Township of Lyndhurst had raised against establishing a shell-loading plant on the site of the old Canadian Car & Foundry Company's plant, was read and ordered received.

Oil—Clearance desired by the Wrightstown Cantonment.—A communication from Major W. A. Starrett asking for clearance on oil and gasoline desired at the above cantonment was presented and cleared and ordered referred to the Raw Materials Committee for action.

Payments—Delay in.—A communication from the Chamber of Commerce of the United States, dated July 10th, enclosing
380 complaint of the Woodhouse Chain Works of a delay in payment by the Boston Navy Yard, was presented and the complaint referred to Paymaster Hancock. Similarly the Chamber of Commerce attached a communication from Aldrich Bros. complaining of delayed payments from the Depot Quartermaster at Philadelphia. This matter was ordered referred to Colonel Hodgson for attention.

Recruiting.—Communication dated July 11th, from Major W. A. Starrett, relative to the advisability of recruiting skilled mechanics for foreign service from those now at the various cantonment sites, was presented and ordered brought to the attention of the Board on or about the 10th of August.

Medical—Proposed Form of Contract for Supplies.—A communication from Mr. R. J. Bulkley, dated July 11th, indorsed by the Accountancy Committee, suggesting certain changes in the proposed standard form of surgical supplies contract, was presented, approved, and ordered referred to the Surgeon General of the Army and Navy.

Labor—Wages.—A communication from Paymaster General of the Navy, dated July 10th (386/16–386/17), regarding shortage of labor at the Appomattox Box Shook Company, Petersburg, Va., was presented and ordered referred to Colonel Littell for his action.

Copper, Zinc, and Lead—Method of Ordering.—A communication dated July 11th, from Mr. Meyer, covering the method of using the arrangement made by the Raw Materials Committee
381 regarding the above subjects by the Purchasing Departments of the Government was presented and ordered referred to Col. Blunt and Paymaster Hancock, who had made inquiry.

Machine Gun.—Communication from Colonel Blunt, dated July 11th, attaching communication from the special Board on Naval Ordnance, dated June 21st, relative to the Rice Centrifugal gun, was presented and ordered referred to the Board of Ordnance and Fortification.

Duck.—A communication from the Quartermaster's Department, dated July 9th (423.2/145—C. E. (G. M.), together with communication from the Department of Agriculture, dated July 3d, and communication from Tyler & Simpson Company, dated June 28th, bearing on a requisition of one-half the output of the manufacturers of cotton duck for the use of the Government, was presented and ordered referred to the Committee on Supplies.

At this point Major Starrett was invited into the meeting.

Aviation—Recommendation of Contractor at Omaha, Neb.—Upon the request of the Construction Division of the Signal Corps of the United States Army, the Committee on Emergency Construction of Buildings and Engineering Works recommended that E. A. Wickham, of Council Bluffs, Iowa, be awarded the contract for building the proposed aviation field at Omaha, Nebraska.

This recommendation was approved by the Board, and it was ordered that the Signal Corps be so advised.

382 *Aviation—Recommendation of Contractor at Mineola, L. I.*—Upon the request of the Construction Division of the Signal Corps of the United States Army, the Committee on Emergency Construction of Buildings and Engineering Works recommended that the contract for the building of proposed aviation field at Mineola, L. I., be given the Clough-Bourne Corporation, of New York.

After consideration, it was moved and carried that this recommendation be returned to the above committee for the purpose of further consideration, and it was asked that alternate names of the best-equipped contractors be submitted to the Board.

Aviation—Recommendation of Contractor at San Antonio, Texas.—Upon the request of the Construction Division of the Signal Corps of the United States Army, the Committee on Emergency Construction of Buildings and Engineering Works recommended that the contract for the building of the proposed aviation field at San Antonio, Texas, be given the Stone & Webster Company, of Boston, San Antonio, Dallas, and Houston.

This recommendation was approved by the Board, and it was ordered that the Construction Division of the Signal Corps of the United States Army be so advised.

Aviation—Recommendation of Contractor—Fort Sill, Oklahoma.—Upon the request of the Construction Division of the Signal Corps of the United States Army, the Committee on Emergency Construction of Buildings and Engineering Works recommended
383 that the contract for the building of the proposed aviation field at Fort Sill, Oklahoma, be given the Selden-Breck Construction Company, of St. Louis, Mo.

This recommendation was approved by the Board and it was ordered that the Construction Division of the Signal Corps be so advised.

Cantonment—Recommendation of Contractor at Tenafly, N. J.—Upon the request of Col. I. W. Littell, Quartermaster's Office, in charge of cantonment construction, the Committee on Emergency Construction of Buildings and Engineering Works recommended that the McCarthy Bros. Company, New York, N. Y., be awarded the contract for the building of the cantonment at Tenafly, N. J.

This recommendation was approved by the Board, and it was ordered that Colonel Littell be so advised.

Cantonment—Recommendation—Contractor at Newport News, Va.—Upon the request of Colonel I. W. Littell, Quartermaster's Office, in charge of cantonment construction, the Committee on Emergency Construction of Buildings and Engineering Works, recommended that the Westinghouse, Church, Kerr & Co., Inc., of New York, N. Y., be awarded the contract for building the proposed cantonment at Newport News, Va.

This recommendation was approved by the Board, and it was ordered that Colonel I. W. Littell be so advised.

Cantonment & Aviation—Form for Approval.—It was moved by Mr. Rosenwald and seconded by Major Pierce that the
384 formal approval of contractors by the General Munitions Board, including those of today, a further communication should be attached stating that in letting these contracts a clause should be inserted which will, within reason, limit the amount of profit which contractors may make on any given contract, in order to forestall wastefulness on the part of the contractor.

Major Starrett and Mr. Bingham were instructed to draw up such a communication to be approved by Mr. Rosenwald before submission to the Government Departments desiring any recommendation.

Lead.—Mr. Meyer stated verbally that the Lead Committee had written to 1,100 lead mines concerning the 8,000 tons of lead which they had agreed to furnish at 8¢, and received only 40 replies thereto. This, he stated, showed the difficulty under which the Raw Materials Committee was working.

Cantonment—Recommendation of Contractors.—Major Starrett was instructed to draw up memoranda covering the reasons why the various contractors, whom they had recommended, were chosen, to be attached to the information already in the General Munitions Board's files and to conform with the information furnished the Board verbally by Major Starrett at the time when the different recommendations were considered by the Board. This was done in view of the possibility that Mr. Starrett might be called from his present position and might become unavailable to furnish this information.

385 *Steel.*—A memorandum dated July 12th, relative to a meeting held this morning between the Committee of the American Iron and Steel Institute, the Secretary of War, the Secretary of the Navy, the Chairman of the Shipping Board, and Mr. Baruch, and covering the situation of the prices the Government should pay for steel, was presented by Mr. Summers and ordered accepted.

Trucks.—At this point Mr. M. B. Johnson, of the White Company, Mr. Zimmerschied, of the Automotive Committee, and a representative of the Pierce Arrow Company, were invited into the meeting to discuss the situation relative to the desire of the Quartermaster Department to place orders for trucks.

It was brought out that the standardized truck could not be built in time but that the various standard makes were satisfactory as modified at the present time. The representative of the Pierce Arrow Company said that the size which they would be called upon to furnish must be supplied them, also the numbers, so that they could lay out a definite schedule.

Mr. Johnson said that certain concerns were best adapted to make very light or heavy trucks, meaning either the 2-ton or 5-ton truck, and that he would suggest that the best way would be for the Government to call a meeting of the truck manufacturers to whom they were going to award contracts, and ascertain from them what size each factory was best adapted for, and let the contracts in accordance with the results arrived at from such a conference.

386 Major Drake at this point entered the meeting and stated that the reason why orders had not been placed as yet was because of the necessity of waiting for a cable from General Pershing, whose advices would largely decide the size of the trucks the Government would order.

Major Pierce confirmed Major Drake's statement and said that the information which General Pershing would furnish was necessary for a decision.

Major Drake was asked to give the manufacturers such definite information as to what would be required of them as he was able. This he said he would do at once.

Particular emphasis was laid on the delay in placing the orders as working a hardship not only on the United States, but likewise upon our Allies who were anxious to place orders for contracts but could not before the United States had so done.

Mr. Scott was requested finally by action of the Board to dictate a letter to the Quartermaster General stating that the delay should not last over forty-eight hours longer, and that if such delay in placing definite orders for the desired amount needed should occur, that the Quartermaster General should place orders for, say, 40% of the desired amount required, which would leave a margin for correction, but would enable the manufacturers to make a start. He was likewise requested to state in the letter that a meeting of manufacturers should be called as explained above.

The meeting adjourned at 1 P. M.

H. P. Bingham, *Secretary.*

387 Minutes of Meeting of the Executive Committee of the General Munitions Board held Friday, July 13, 1917, at 8:30 a. m., in the Munsey Building

Present: Colonel Blunt; Colonel Hodgson; Dr. Simpson; Major Pierce; Paymaster Hancock; Mr. Meyer; Mr. Rosenwald; Mr. Bolton. Also: Mr. Cook; Major Starrett; Major Crowell; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Lead.—A communication dated July 11th, from Mr. Meyer, relative to the lead situation, was read and ordered accepted.

Copper.—A communication from Mr. Meyer dated July 11th, attaching copy of communication from the Ordnance Department (#770.15/124) dated June 25th, accepting the price of 25¢ per pound for 60,000,000 lbs. of copper arranged for by the Raw Materials Committee, was presented; likewise copy of communication from the Ordnance Department, dated July 6th (#G–470.15/19) stating that the Secretary of War had disapproved of the arrangement referred to, and a communication from J. D. Ryan, Chairman of the Copper Committee, dated July 10th, relative thereto, was presented and ordered made a matter of record.

388 *Lumber.*—A copy of a communication addressed to the Lumber Committee by Mr. Worcester of that Committee, dated July 12th, relative to the price of lumber which the Bureau of Yards and Docks had paid for cantonment at Great Lakes Naval Station, showing that the Government had lost approximately $65,000, by not using the offices of the Lumber Committee, was presented. The fact that this lumber had not been cleared through the General

Munitions Board was brought out and the fact that the Bureau of Yards and Docks did not use the recommendation of the Lumber Committee.

The matter was referred to Paymaster Hancock for investigation and report.

Storage.—A report from that Committee, relative to unified policy in handling stores was presented and ordered held under advisement until the next meeting of the Board.

Cantonments—Contractors Recommended for National Guard Camps.—The Committee on Emergency Construction of Buildings and Engineering Works presented the following recommendations for contractors to be employed in carrying on work at the various National Guard camps as given below:

(1) At Augusta, Ga.: T. O. Brown, Augusta, Ga.
(2) At Spartansburg, S. C.: Fisk, Carter Construction Co., of Greenville, S. C.
(3) At Greenville, S. C.: Gallivan Building Co., Greenville, S. C.
(4) At Houston, Tex.: American Construction Co., Houston, Tex.
(5) At Macon, Ga.: W. Z. Williams, Macon, Ga.
(6) At Ft. Sill, Okla.: Selden-Breck Construction Co., St. Louis, Mo.
389 (7) Waco, Tex.: Fred A. Jones Construction Co., Dallas, Tex.
(8) At Alexandria, La.: Stewart-McGehee Construction Co., Little Rock, Arkansas.
(9) At Fort Worth, Texas: J. W. Thompson, Dallas, Texas, & St. Louis, Mo.
(10) At Deming, New Mexico: J. W. Thompson, Dallas, Texas, and St. Louis.

Cantonment—Construction of Roads.—A communication from Dr. Simpson, dated July 12th, calling the Board's attention to a certain type of construction of roads, was presented and ordered referred to the Emergency Construction Committee with the request that that Committee obtain a report from Mr. Serene on this subject and circulate such a report among the engineers in charge of the various camps in the localities referred to.

Machine Gun Committee—Resignation of Mr. Hanson.—A communication from Mr. Hanson, Chairman of the Machine Gun Committee, was presented stating that due to his having accepted a position with the Colt's Patent Fire Arms Manufacturing Company, who were to receive and had received Government orders for machine guns, he felt it necessary to tender his resignation as Chairman of that Committee.

Mr. Hanson's resignation was ordered accepted and the Secretary was instructed to advise Mr. Hanson of the regret of the Board at his action and to express the Board's thanks for the valuable assistance he had rendered.

390 *Duck.*—The following requests for approval of confirmation of prices from the Ordnance Department were approved:

(1) Request dated July 12th: Cartridge Belts, Order # E. X.–18.
(2) Request dated July 10th: Canteen Hangars, Order # E. X.–17.
(3) Request dated July 12th: Cotton Covers, Order # E. X.–19.
(4) Request dated July 12th: Cotton Duck, Order # E. T.–52.
(5) Request dated July 12th: Cotton Webbing, Order # E. T–53.

Steel—Price for Knives.—A request dated July 9th, from the Ordnance Department, Order No. E. A.–4, covering prices for knives, was approved by the Board.

Duck.—(1) Communication from the Quartermaster of the Marine Corps, dated July 11th, asking for clearance on 200,000 yards of woolen uniform cloth, was cleared subject to the approval of the Supplies Committee.

(2) Clearance was granted, subject to the approval of the Supplies Committee, on certain denim required by the Charleston Navy Yard, Requisition # 32–S. N. A., dated June 26th.

Artillery—Delay in placing contracts.—Major Crowell, of the Committee on Army and Navy Artillery, informed the Board as to the dates of the various recommendations they had made to the Bureau of Ordnance and the Ordnance Department, which recommendations had as yet received no attention by these departments. The recommendations made, which covered companies who were willing and could undertake the manufacture of artillery, totaled an available amount approximately equal to the requirements of the two departments.

391 Major Crowell stated that a small order had been given the Bethlehem Company and likewise the Midvale Steel Company on a tentative basis only. He said that the companies with whom the Committee on Army and Navy Artillery had made these arrangements can no longer be held available as they were in a position where they must know whether they were to receive such orders or not.

Major Pierce brought up the fact that the French were in need of gun forgings and pointed out these complications.

The fact that the Munitions Board had done all in their power to develop the capacity and had continuously advised the two departments that prompt action was imperative was emphasized, and it was the opinion of the Board that it could not accept any responsibility should there be a shortage in artillery when the artillery was needed in the field.

Mr. Scott brought up the question that since the advices furnished by the General Munitions Board to the various Departments, in accordance with instructions given, the Board was not being used and that since certain governmental policy, of which the Board is not kept advised, often interfered with such advices, it was a question as to whether the advices of the Board are any longer necessary or needed.

Mr. Gifford, at this point, having been invited into the meeting, entered.

Mr. Scott explained to Mr. Gifford the situation as given above and stated that the Board issued advices in this matter. Mr. Gifford asked whether it was the opinion of the board that with more power the board could better assist the Government, and was advised in the affirmative.

392 The artillery situation was then laid before him, and Mr. Gifford advised that the General Munitions Board was a creation of the Council of National Defense and that as the Council had never received a report showing how matters were progressing he suggested that such a report be drawn up and submitted to the Council.

This suggestion was acted upon favorably by the Board and Mr. Scott, Major Crowell, and Mr. Bolton were appointed a committee to draw up such a communication.

The meeting adjourned at 11:30 A. M.

(sgd) H. P. Bingham, *Secretary.*

393 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Monday, July 16, 1927, at 8: 30 a. m., Munsey Building**

Present: Major Pierce, Colonel Blunt, Colonel Hodgson, Mr. Rosenwald, Paymaster Hancock, Mr. Meyer, Mr. Bolton. Also Mr. Cook, Mr. Titsworth, Major Starrett, Mr. F. A. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Embargo.—A communication from the Department of Commerce, dated July 9th, asking for an opinion as to what articles should be included under the list requiring certificate for exporting of munitions, was presented and ordered referred to Colonel Dunn and Mr. Summers with a request that they prepare such a list for the Board.

Storage—Organization.—A communication from Mr. Cook, Chairman of the Storage Committee, dated July 13th, relative to the need of uniting the storage work of the Departments under one head, was presented; likewise a communication from Mr. Cook concerning storage buildings to be erected at Cantonments and National
394 Guard sites, and the places of embarkation, was presented. These communications were referred to Major Pierce for study by a Committee of the General Staff, with a request that an early report be presented if possible.

Artillery—Placing of Orders.—A communication from the Chief of Ordnance, dated July 11th (G. C. 472.811/37), concerning the letting of certain orders for artillery, was presented and ordered referred through Mr. Bolton to the Artillery Committee for analysis.

Medical—Quinine desired by Italy.—A communication from the Italian Military Mission (1158 D. G.), dated July 13th, and addressed to Dr. F. F. Simpson, inquiring for certain quinine, was presented and cleared.

Lumber—Supply for Cantonments.—A communication from Colonel Littell, dated July 11th, stating that lumber was not arriving fast enough at the cantonments to permit of the completion of the cantonments by September 1st, was presented and ordered referred to Mr. Bolton to take up with the Lumber Committee, with a view to getting a satisfactory report on the Lumber situation.

Exhibit of Supplies.—A communication from the Quartermaster General, replying to a previous memorandum relative to a central depot for samples of material required by the Government, and stating that such exhibits were held at the various quartermaster depots, and that a central exhibit was not therefore necessary, was presented and Mr. Rosenwald was requested to ascertain whether such exhibits were actually being held at certain depots.

395 *Artillery—Gun Carriages.*—A communication from the Chief of Ordnance (File No. 473.15/40), dated July 12th, regarding recommendation to place an order with the J. G. Brill Company, stating that the Rock Island Arsenal is being considered for placing 183 4.7″ gun carriages, was presented and ordered accepted.

Intelligence.—A communication from the Hartford Fire Insurance Company, relative to possible leaks originating from surety bonding houses, was presented and ordered referred to Major Van Deman of the Naval Intelligence Bureau.

Cantonment—Construction.—A bulletin gotten out by the Thompson-Starrett Company, who are engaged in building the Yaphank Cantonment, and a bulletin gotten out by the Mason-Hanger Company, engaged in building the Louisville, Kentucky, Cantonment, were presented and referred to Mr. Rosenwald for the purpose of getting these bulletins in the Congressional Record if possible in order to inform Congress as to the spirit under which the cantonments are being built.

Machine Guns.—A communication from the Chief of Ordnance (No. 472.522/3), dated July 13, 1917, relative to the machine-gun situation regarding aeroplanes, and likewise stating that the machine-gun program is progressing satisfactorily, was presented and ordered placed on record.

Projectiles—6″ and Up—Primers, Fuses, Powder.—A communication from the Gun Division of the Ordnance Department (No. G. 334.8/8) July 12, 1917, giving a list of certain orders that had been placed, was presented and ordered made a part of record.

396 *Duck.*—The following orders from the Ordnance Department were approved as to prices:

(1) E. X.-20.
(2) E. X.-21 and E. X.-22.
(3) E. T.-60.
(4) E. T.-53.
(5) E. T.-55, 56, 57, 58, 59.
(6) E. T.-54.

Leather.—The following orders were approved as to prices:

(1) E. L. 20 and 21.
(2) E. L. 22.
(3) E. L. 17.

Artillery Forgings—Propeller—Shafting for Destroyers.—Clearance was granted the Bureau of Steam Engineering on Requisition No. 83, covering a quantity of the above.

Chemicals.—Clearance was granted the Bureau of Ordnance on their requisition no. 161, dated July 5th, for a quantity of TNT.

Cantonment Contractors.—The following recommendations from the Committee on Emergency Construction of Buildings and Engineering Works, covering proposed contracts to build certain National Guard camps, were approved:

(1) At Hattiesburg, Miss.—T. S. Moudy & Co., Chattanooga, Tenn.
(2) At Linda Vista, Calif.—William E. Hampton, Los Angeles, Calif.
(3) Anniston, Alabama—John O. Chisolm & Co., New Orleans, La.
(4) Montgomery, Alabama—Algernon Blair, Montgomery, Ala.
397 (5) Mineola, L. I.: Clough-Bourne Corporation, New York, N. Y.

A verbal report on the situation in connection with this last company as to their ability and standing having been presented, the Board passed a motion that the action of the Chairman in recommending them to the constructing officer of the Signal Corps be confirmed and that the above officer be so advised.

Trucks.—A communication from the Quartermaster General of the United States Army (File #451.2), dated July 16th, stating that orders for 11,000 trucks had already been placed, and that this would last until 1918, at which time he reported he would be able to get a

sufficient quantity of standardized trucks, was presented and ordered referred to Colonel Hodgson to ascertain to whom these orders for the 11,000 trucks had been awarded.

The meeting adjourned at 10:30 A. M.

H. P. BINGHAM, *Secretary.*

398 **Minutes of Meeting of the General Munitions Board held Tuesday, July 17, 1917, at 11 a. m., Munsey Building**

Present: Admiral Capps; Colonel Hodgson; Dr. Simpson; Mr. Meyer; Dr. M. T. Bogert; Mr. Summers; Mr. Rogers; Dr. Millikan; Mr. Teele; Mr. Toulmin; Mr. Ingels; Mr. Bolton; Major Starrett; General Aleshire; Admiral Zane; Admiral Rousseau; General Cruise; Admiral Richie; Col. Lemly; Commander Leigh; Paymaster Hancock; Major Woods; Major Pierce; Major Kelly; Commander Kearney; Mr. Scott, presiding; and Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Cantonment Contractors.—A letter prepared by the Chairman and addressed to Mr. G. A. Kittinger, relative to the method the General Munitions Board is using in recommending contractors for cantonments and other emergency construction work, was read and approved by the Board.

Trucks—Contracts placed by the Quartermaster.—A copy of a telegram sent to the Depot Quartermaster, Chicago, by General Sharpe, dated July 16th, setting forth orders to be given certain truck manufacturers, was read and ordered made a matter of record.

Aviation—Wood for propellers.—A communication of July
399 14th, from the Aircraft Production Board, requesting that the General Munitions Board use their offices to have red birch used for gun stocks in place of black walnut, was presented and ordered referred to Colonel Blunt for investigation and report.

Production.—A communication from Mr. E. S. Crawford, assistant to the Director, relative to the establishment of a Follow-up Department, was presented and ordered referred to Colonel Dunn for comment.

Cantonment Construction.—A communication from the Accountancy Department, dated July 16th, calling attention to the difficulty certain auditors were experiencing at the proposed cantonments, primarily due to misconception of the duties of such officers on the part of the constructing officer, was presented.

It was duly moved and carried that Mr. Scott consult with the Secretary of War for the purpose of removing the misconception. Mr. Teele was asked to draw up a paper which would show the duties of the auditors and clearly define their position.

It was clearly brought out that Colonel Littell was heartily in favor of the audit.

Construction Contracts.—A report from the Accountancy Committee, also from Mr. Auld and Paymaster Hancock, relative to the advisability of using cost-plus-percentage contracts, were presented. It was emphasized by the Chairman that all agreed that whenever possible contracts should be based on a flat price. If this is impossible they should include a cost-plus fixed-profit clause giving the maximum and minimum profit.

These reports were ordered referred to: Admiral Capps,
400 Major Wood, Admiral Rousseau, Major Kelly, Col. Dunn, General Cruse and Major Starrett, for their information.

Construction Contracts.—A communication from the Accountancy Committee, dated July 12th, relative to their definition of the term "cost", was presented and the names of the members of the Committee on Accounting Costs were read and approved by the Board.

These papers were ordered filed.

Cantonment Construction—Use of Government Engineers.—In reply to a communication from Colonel Littell, concerning contracts with the several engineers, the Accountancy Committee presented a communication suggesting that Government engineers be used. This matter was referred to Major Kelley for his investigation and report.

Cantonments—Recommending contractor for National Guard Camp at Charlotte, N. C.—The Committee on Emergency Construction of Buildings and Engineering Structures recommended that the Consolidated Engineering Company of Baltimore, Md., be given the work at the National Guard Camp at Charlotte, N. C.

This recommendation was approved by the Board and forwarded to Colonel Littell.

Chemicals—T. N. T.—A communication from Paymaster Hancock (File 302/233) dated July 14th, relative to the shortage in T. N. T., together with a report from Riley bearing on this subject, was read.

The need for a thorough investigation and increase in the production of the country, of T. N. T., was agreed to by the Board. The Chairman thereupon appointed a committee consisting of the
401 following: Colonel B. W. Dunn, of the Ordnance Department; Lt. Comdr. Caskey, of the Bureau of Ordnance; Dr. M. T. Bogert, of the National Research Council; Major Crabbs, of the Chemical Committee; and Mr. Summers, of the Raw Materials Committee, to investigate this subject for the Board. The appointments were ratified.

Chemicals—T. N. T.—A communication from the Office of the Chief of Ordnance, Gun Division, dated July 13th (File G. E. 471.868/41), relative to the capacity of the Du Pont Company and of Curtis & Harvey, Ltd., for T. N. T., and stating that certain large orders had been placed with these companies by the Ordnance Department was presented.

Because of the fact that explosives appear on our shortage list and therefore the Board should be consulted before purchases are made, this matter was referred to Colonel Dunn for investigation.

Machine Guns.—A communication from the Chief of Ordnance, dated July 13th (File #472.522/3), relative to the orders placed by them and proposed orders for machine guns for aeroplanes, was presented. The impression was gained from this letter that the Ordnance Department did not care to use the Machine Gun Committee of the General Munitions Board further in obtaining machine guns.

Colonel Blunt stated that the impression which the letter conveyed was erroneous and that the Ordnance Department intended to ask the General Munitions Board for prices on these and future orders for guns, but that the Department did not anticipate the need of assistance in locating and developing sources of supply.

402 *Lumber—Needed for Work in Europe.*—A letter from Major Starrett, dated July 16th, relative to the advertising for bids by the Corps of Engineers, U. S. Army, their bid #363, covering a large quantity of lumber desired for construction work in Europe, was presented. To this communication was attached a letter from Mr. Downman, of the Lumber Committee, stating that since lumber is on the shortage list, the Board should have been consulted and the lumber bought through the Lumber Committee.

This matter was referred to Major Kelly for investigation and report.

Chemicals—Picric Acid and T. N. T.—Clearance was given the Italian Government on 2,100 TS of picrate acid.

Lumber—Amounts needing Clearance.—Major Kelly inquired as to how large an order for lumber should require clearance by the Board. It was the sense of the meeting that any amount which can be supplied by a local market where the material is desired, without disturbing the local conditions, would need no clearance.

Cement—Method of Purchase.—Major Kelly spoke of the difficulty the Engineer Corps was experiencing because of the fact that the Cement Committee was shipping various makes of cement to every job; in this way uniform construction was impossible.

Mr. Meyer explained the necessity for the cement shipments being handled in this way. Major Kelly was instructed that when cement was required in only small quantities that it should be procured
403 in the usual way.

Chemicals—H. E.—Major Pierce stated that conditions had changed in Europe in such a way that it was highly probable that a greater amount of high explosives would be used in the future than had been anticipated—thus showing the increasing need for developing our facilities for manufacturing high explosives.

The meeting adjourned at 12:44 P. M.

H. P. BINGHAM, *Secretary.*

404 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Wednesday, July 18, 1917, at 8:30 a. m., in the Munsey Building**

Present: Major Pierce, Colonel Blunt, Colonel Hodgson, Paymaster Hancock, Mr. Summers, Mr. Meyer, Mr. Bolton. Also Major Starrett; Major Crowell; Mr. Cook; Mr. Scott, presiding; and Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Duck Required by Signal Corps.—A communication from Mr. Eiseman, advising that the Signal Corps purchase certain 83,000 yards of duck through the Quartermaster's and Ordnance Department, was read and referred to Colonel Hodgson.

Priority Committee—Membership from U. S. Shipping Board Emergency Fleet Corporation.—A communication dated July 16th, from General Goethals, general manager, suggesting that it would be helpful for a member of his corporation to become a member of the Priority Committee, was read and approved.

Cantonment Construction.—A communication from Major Starrett, together with letters from Senator McKellar, relative to reported wastes at Chickamauga, was read and Major Starrett was instructed to dictate a letter for Mr. Gifford's signature, addressed to Senator McKellar regarding this subject.

405 *Labor.*—A communication from Mr. Shirley, of the Committee on Military Affairs of the House, inclosing a communication relative to wages being paid certain labor at a cantonment site, was read for the information of the Board.

Cantonment Construction—Storage Buildings.—A communication from Colonel Hodgson, dated July 17th, showing the amount of storage space being provided at camp and cantonment sites, was read and ordered referred to Mr. Cook to go over the situation and compare with his own records.

Payments—Private Funds for Committee Use.—A communication from Mr. Gifford, Director, dated July 17th, was presented regarding the matter of the Storage Committee using funds not originating from appropriations available for the use of the Council of National Defense.

Mr. Cook stated that funds had already been thus raised for his Committee's use and had been spent, and that further funds were being received from manufacturing associations of various states, and that a bank account had been started by his Committee to handle such funds in the name of his Committee.

Mr. Gifford was invited into the meeting and was asked whether this should be done or whether the Council would take over such expenses of the Committee. Mr. Gifford stated that he could see no reason why the Council should not assume such expenses but that there was no reason why such other funds should not be used.

Mr. Cook was asked to present a report showing what funds had already been thus received and how spent and also what future funds have been arranged for and for what purposes they will be used.

406 *Investigation.*—Criticism by Mr. Vrooman, of the Department of Agriculture, of the steel men recently called to Washington, which appeared in the Washington Post of this morning, was commented on. It was requested that Mr. Gifford, Mr. Scott, and Mr. Baruch bring this to the attention of the Council, showing that such criticism from a Government official is very harmful and will eventuate into a condition where such men will refuse to come to Washington, thereby depriving the Government of their advice and cooperation.

Trucks.—A communication from Mr. Bolton, dated July 17th, relative to the fact that the Chicago Quartermaster's Depot was asking for bids on trucks, was presented, and wonder was expressed as to why this action should be taken, because of the fact that the Quartermaster's Department has just let contracts for 11,000 trucks.

This matter was refererd to Colonel Hodgson for investigation and report.

Trucks.—A communication from Mr. Gifford, dated July 18th, showing status of the Automotive Committee, was presented.

Due to the fact that this Committee was under Mr. Coffin, Mr. Scott was asked to talk over the situation with Mr. Coffin relative to the truck situation.

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Attention was drawn to the fact that particular emphasis was being laid on engineering features of the trucks needed by the Government and not enough emphasis upon the manufacturing possibilities.

It was the sense of the meeting that the proposed standardized truck, of which only blueprints existed at present, will not be commercially developed to answer the needs of the Government by January 1, 1918, as anticipated by the Automotive Committee
407 of the Quartermaster's Department.

Mr. Scott stated that the letting of the recent contracts had been done in such a way as to lead him to believe that the Quartermaster's Department did not need the offices of the General Munitions Board any longer on the subject of trucks.

Major Pierce stated that he thought the War Department needed the assistance of the Board almost more in regard to trucks than in regard to anything else.

This subject was ordered again brought to the attention of the Board on July 21st or 22nd, after the returns from the meeting of Automobile Constructors at Columbus, Ohio, had been received. This meeting is to be held on July 20, 1917.

Artillery—Forgings and Machining.—A communication from the Ordnance Department, giving a list of orders and deliveries for machined guns, was presented.

Major Crowell stated that his Committee had never received a program of the needs for artillery and that this Committee was unable to secure such a program from the War Department.

It was the opinion of the Board that the General Munitions Board would be held responsible, however falsely, for failure to furnish the army with enough artillery to meet their needs, and which was sure to happen, due to the various delays already occasioned and likely to occur if nothing radical were done.

A report of the Artillery Committee, dated July 14th, was read, asking whether they should go ahead with the development of sources of supply for artillery beyond the present point.

408 Major Crowell stated that the delay in letting the recommended contracts had resulted in all these companies losing options on material; and as prices for material had gone up, the guns will cost the Government more, and delays incidental to the reopening of these subjects will further delay the production.

Colonel Blunt read a sample letter from the Ordnance Department to certain prospective manufacturers of artillery authorizing them to go ahead, but in no way placing an order with them.

It was the sense of the meeting that the companies were not justified in proceeding with the expenditure of money on the basis of the letters sent.

The inadequacy of the present organization to properly handle the situation, the seriousness of which was again emphasized as being extreme, was discussed. It was moved and carried that the Chairman, with the assistance of Major Crowell and Colonel Blunt, prepare a communication to the Council of National Defense, a copy of which was to be sent to the Secretary of War and to the Secretary of the Navy, expressing the grave concern of this Board over the artillery situation and explaining its present status.

Duck—Clearance of Webbing.—Prices of webbing, as covered in the following orders, was approved by the Board:

(1) E. T.-62.
(2) E. T.-61.

Chemicals.—Clearance was given the following, covered by memorandum from Paymaster Hancock (File 302/182), July 16th; 1,800 tons of sulphuric acid.

409 *Optical Glass—Clearance.*—Clearance was given the Bureau of Ordnance on Optical Glass to be used in 36 range finders, covered by Requisition #262/18, dated July 11th.

Lumber.—Clearance was given the Navy Department on Lumber covered by Requisition #43, desired by the Charleston Navy Yard, subject to the approval of the Lumber Committee.

Rifles and Small Arms.—Relative to a communication from the Small Arms Division of the Ordnance Department (471.876/22) relative to the placing of 1,500,000 cartridge clips, it was the opinion of the Board that the entire order should be given to the Smith & Wesson Company at their quotation of $12.87 per thousand.

The meeting adjourned at 11:25 P. M.

H. P. Bingham, *Secretary.*

410 Minutes of Meeting of the Executive Committee General Munitions Board held Thursday, July 19, 1917, at 8:30 a. m., Munsey Building

Present: Major Pierce; Paymaster Hancock; Colonel Blunt; Dr. Simpson; Colonel Hodgson; Mr. Summers; Mr. Bolton; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Wagons—Spokes for Artillery Wheels.—A memorandum from Mr. Bolton, dated July 18th, relative to the Gun Division's requirements for wood for artillery spokes, was presented.

It was brought out that Colonel Rice was present at the meetings of the Committee formed to secure such necessary lumber and that he then should have arranged for his requirements.

The matter was referred to Colonel Blunt for further investigation.

Chemicals—Powder Bags.—A memorandum from Mr. Bolton dated July 12th, relative to the shortage of noils for making powder bags and quoting Mr. Cheeney relative to the shortage thereof, was referred to Mr. Bolton to take up with Colonel Hoffer and Lt. Commander Caskey, for their investigation as to the situation.

411 *Lumber—Reported Shortage at Cantonment Sites.*—A communication from Mr. Bolton, dated July 16th, referring to the above and quoting report of the Lumber Committee on this subject, was presented. This report showed that the shortage was largely due to the contractors ordering only their immediate needs because of their desire not to be forced to store their future requirements at the sites, and also because of lack of transportation facilities.

This statement was ordered submitted to Colonel Littell, who had brought up the subject in his communication of July 7th.

Trucks—Automotive Committee.—A communication from Mr. Bolton, showing the standing of the Automotive Committee, as related to the Council of National Defense, was presented and ordered referred back to Mr. Bolton to submit to Major Drake for his information.

Priority Committee—Cooperation of Executive Departments.—A memorandum dated July 12th, from Mr. Bolton, stating that the Army and Navy Departments are in some cases acting with a view of creating precedence of orders, was presented and ordered accepted. No action was taken, due to the fact of the noninterference with the work of the Priority Committee because of such actions of the Departments.

Priority Committee—Need for Power to Cover Requirements of Civilians as Compared with Needs of Allies.—A memorandum from Mr. Bolton, relative to the above subject, was presented; and it was ordered that a memorandum be drawn up for submission to the Council of National Defense, requesting that such powers be given the Priority Committee.

Paymaster Hancock was ordered to prepare such a memorandum.

412 *Cantonment Contracts—Contract Covering Engineering Works.*—A communication from Major Kelly, of the Corps of Engineers, was presented in reply to a request for advices, and saying that no regular army engineers were available for the engineering work at the cantonment sites, but that reserve officers could be designated for this work. It was the opinion of the Board that a flat fee for engineering services when civil engineers are engaged should be paid, as such services should receive exorbitant rewards.

This matter was referred to a committee consisting of Mr. Scott, Colonel Hodgson, and Mr. M. C. Tuttle for investigation and report.

Cantonment Construction—Work at Norfolk.—A report from Mr. M. C. Tuttle, dated July 18th, stating that due to the large amount of building operations now engaged in by the various Government Depts., the situation in Norfolk as to labor, etc., was extremely acute, and that some action should be taken for the purpose of halting a part of this work, and likewise stating that one officer of either the army or the navy should be put in charge of all the building operations there for the purpose of coordinating the work.

Mr. Scott stated that the General Munitions Board has the power to stop any part of this work until the subject has had the proper consideration and possible action of either the Secretary of War or the Secretary of the Navy has been taken.

This matter was referred to Major Pierce to take up with the Secretary of War.

Copper.—A communication from Mr. Meyer, dated July 16th, giving the history of the copper situation in connection with the 60,000,000 pounds arranged for by the Committee on Copper for the Ordnance Dept., was presented and ordered made a matter of record.

413 *Zinc.*—A communication from the Gun Division of the Ordnance Department (G 470.15/79), dated July 16th, relative to the approval of the Secretary of War of the prices of 13½¢ for grade A zinc, and 13¢ for grade B zinc, arranged for by the Zinc Committee for that Department, was presented.

This communication was read and ordered made a matter of record.

Aviation—Steel Cylinders needed.—A communication from the Aircraft Production Board, dated July 13th, stating that the Aircraft Program would require approximately 400,000 steel cylinders 6″ x 16″, was read and ordered made a matter of record.

Projectiles—6″ 155 m/m.—A communication from Colonel Hoffer, dated July 18th, asking for confirmation of prices on certain 155 m/m shells which they were about to purchase, and also asking for confirmation of their proposed awards and stating that the facilities of the country for this size shell are exceedingly limited, was presented. This matter was referred to a committee composed of Mr. Scott, Mr. Summers, Colonel Blunt, and Colonel Dunn, with power to act, and also to include in their report to Colonel Hoffer a list of manufacturers in this country who are equipped to manufacture such shells, which list is of considerable length.

Projectiles—3″ 15-Pounder Shells.—A communication from Col. Hoffer, dated July 18th, relative to the placing of contracts for the above, was referred to Mr. Scott, Mr. Summers, Colonel Dunn, and Colonel Blunt for action.

Duck For Signal Corps—Hangars.—A communication from Colonel Hodgson, dated July 18th, relative to certain canvas desired by the Signal Corps for hangars, was presented, and his suggestion that the Signal Corps be informed that this canvas cannot be supplied without reducing the canvas available for tents, was approved and ordered transmitted to the Signal Corps.

414

Leather, etc.—Prices were confirmed on the following orders, upon request of the Ordnance Department:

Order No. E. L. 23—July 16, 1917—Leather.
" " E. L. 5—July 18, 1917—Leather.
" " E. X. 23—July 18, 1917—Feed Bags (100,000).
" " E. H. 3—July 17, 1917—German Silver Spurs, Complete.
" " E. H. 5—July 17, 1917—German Silver Spurs, Complete.
" " E. H. 6—July 17, 1917— " " " "
" " E. H. 7—July 17, 1917—Curb Bit & Chain, Complete, Model '09.
" " E. H. 8—July 17, 1917—Snaffle Bit, Model '09.
" " E. H. 4—July 17, 1917—Snaffle Bit, Model '11.
" " E. H. 2—July 17, 1917—Arm Repair Chests.
" " E. A. 3—July 14, 1917—Knives.
" " E. A. 2—July 16, 1917—Ingot Aluminum.

The Meeting adjourned at 10:30 A. M.

H. P. Bingham, *Secretary.*

415 **Minutes of the Meeting of the Executive Committee the General Munitions Board held Friday, July 20, 1917, at 8:30 a. m., Munsey Building**

Present: Colonel Blunt; Colonel Hodgson; Major Pierce; Paymaster Hancock; Dr. Simpson; Mr. Summers; Mr. Eiseman; Mr. Cook; Mr. Scott, presiding; and Mr. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Priority Committee—Powers of.—A memorandum dated July 19th, addressed to the Director of the Council of National Defense, regarding the above and giving the personnel of the Priority Committee, was approved and ordered transmitted to the Director.

Steel—4,000,000 pounds of steel for rifle barrels.—A memorandum was submitted to the Board stating that Crucible Steel Corporation agreed to furnish steel at 13¢ pound. It was the opinion of the Board that this price is too high.

The matter was ordered referred to Colonel Blunt and one member of the Raw Materials Committee, with power to act for the Board.

416 It was suggested that the Crucible Steel Company be requested to furnish this steel, the price to be determined later.

Chemicals—Powder—Hercules Powder Co.—As the prices of 60¢ and 62¢ are the same as had previously been thought fair and just, the Board is of the opinion that the proposition now made by the **Hercules Company be accepted.**

Cantonment Construction—Newport News and Norfolk.—General Kernan, Assistant to Chief of General Staff, was introduced to the Board. He discussed informally the plans for and the importance of having the above site improved as a leading port of embarkation. His attention was called to the enormous amount of work now being done there, resulting in the necessity of determining priority of the work, also the necessity of having some regulation to prevent the various contractors bidding competitively for labor.

The result of this discussion was that General Kernan and Mr. Scott are to interview the Secretary and try to work out—

1. Some order of prioriy, and
2. To have someone appointed to see that this priority is carried out.

General Order #49—As affecting the work between the General Munitions Board and the Ordnance Department.—Colonel Blunt called attention to the above order. After some discussion, it was decided that Mr. Scott and Colonel Blunt should draft a letter to the Equipment Division of the Ordnance Department.

Copper—Price—Ordnance Department.—Colonel Blunt's letter of July 19th, addressed to Mr. Baruch, was read and ordered

417 received by the Board. This letter advised the Raw Materials Committee that if they could secure 15,000,000 pounds of copper for the Ordnance Department at 20¢ per pound, that the Secretary of War would approve this price.

Mr. Meyer advised that he had wired the Secretary of the Copper Committee and expected immediate action in this matter.

Cantonment Construction—Bonding and Insurance.—Report dated July 18th, over the signature of Mr. Bolton, regarding fire insurance and contractor's bonds being handled by the committeemen interested in this subject.

This report was ordered received.

Rifles and Small Arms and Ammunition.—A report from the subcommittee on small arms and ammunition, dated July 17th, was submitted and ordered received.

Artillery Forgings—Present Situation.—Mr. Scott advised that the Secretary of War is conversant with the Board's views concerning the artillery situation and that he (Mr. Baker) was to confer last evening with the President, regarding this matter.

Priority.—Attention was called to certain machines ordered from Brown & Sharpe. This matter was referred to the Priority Committee.

Projectiles—6" and up—American Radiator Company.—Letter was read from the American Radiator Company, offering the facilities of their French plant to the United States Government.

418 The Board requested Mr. Scott to address a letter to the Ordnance Department, presenting this offer, and asking for their comment.

Projectiles—8" ———.—Attention was called to the delay in having formal contract placed with the McMyler Interstate Company. This matter was referred to Colonel Blunt with a request that he take the subject up with the Ordnance Department in such a way as to avoid future delays of this kind in having papers come through.

Leather, etc., ——— —Contracts for Material.—Deeming the prices to be fair and just, the Board sees no reason why the following contracts should not be placed by the Ordnance Department:

Order No. E. A.–5—July 17, 1917—Spoons.
" " E. E.–3—July 18, 1917—Pistol Holsters.
" " E. E.–4—July 18, 1917—Pistol Holsters.
" " E. E.–5—July 19, 1917—Saddle Bags.
" " E. E.–6—July 18, 1917—Saddle Bags.
" " E. E.–7—July 19, 1917—Cavalry Bridles.
" " E. E.–8—July 18, 1917—Cavalry Bridles.
" " E. H.–9, 10, 11—July 18, 1917—Hardware Equipment.
" " E. A.–12—July 19, 1917—Soft Sheet Steel.
" " E. L.–27—July 18, 1917—Leather.
" " E. T.–64—July 18, 1917—Canteen Felt.
" " E. X.–24 and 25—July 19, 1917—Haversacks, pack carriers, and pouches.

Storage Committee.—Report from Mr. Cook, dated July 18th, addressed to Mr. Scott, regarding the method of meeting expenditures, was submitted to the Board. This report was ordered

419 received and the following action taken:

The Board is of the opinion that this committee is necessary; that there is no reason why the organization should be changed; that money must be provided to support the Committee; that if the Council cannot provide funds that private subscriptions should be used, providing proper accounting is maintained; that it is necessary that the work of this Committee shall not be interfered with, at least for the present.

Mr. Meyer was requested to go over this report with Mr. Gifford and advise him that action would be deferred.

Optical Glass—Navigation and Nautical Instruments.—A report was submitted by the Committee on Navigation and Nautical Instruments dated July 4th. This report was ordered received. At the request of the Board, Paymaster Hancock made the following comments:

Apparently has reference to Emergency Fleet Corporation so far as new matters are concerned. Matters previously taken up have been commented upon fully by the Navy.

The meeting adjourned at 11 o'clock A. M.

H. P. INGELS, *Secretary.*

420 **Minutes of Meeting of the Executive Committee the General Munitions Board held on Monday, July 23, 1917, at 8: 30 a. m., Munsey Building**

Present: General Pierce; Colonel Hodgson; Paymaster Hancock; Dr. Simpson; Mr. Rosenwald; Mr. Meyer; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Intelligence—Need for Secrecy on the part of Civilians.—A memorandum from Mr. Scott, dated July 21st, was read calling attention to certain information which had been given out by civilians connected with Government work which is of distinct advantage for the enemy to know.

This memorandum was referred to Colonel Pierce with the idea that he have a War College officer draft a memorandum covering this subject, to be submitted to Director Gifford with the idea of strongly impressing the need for secrecy upon the members of the various committees of the Council.

Trucks.—A memorandum dated July 20th, addressed to Mr. F. A. Scott, from the High Commissioner of the French Republic in the United States, asking that an order for 1,800 five-ton Pierce Arrow trucks be placed by this Government with the Pierce Arrow Company, to be turned over to the French Government with a view of in this way eliminating a certain commission which the French Government is required by contract to pay one of
421 their representatives, was presented and ordered made a matter of record.

Intelligence—Necessary Secrecy in Handling of Reports.—A communication from Mr. C. D. Kerr of the director's office, was presented attaching copy of a history of the General Munitions Board which he had prepared, asking whether there was any reason why this report should not be published. This was referred to Colonel Pierce to study and report as to what action should be taken.

Storage—Baling of Supplies.—A communication from Mr. Cook, suggesting that it was advisable to bale all supplies, the nature of which permitted such handling, and asking as to what methods should be pursued to get action on this question, was presented.

This matter was referred to Colonel Hodgson for investigation and report.

TNT—Request for Shipments to Switzerland.—A communication from the Director, dated July 20th, stating that the Chairman of the Exports Council had requested that he be advised as to whether we should be allowed to export twenty or thirty tons of TNT to Switzerland, was presented.

The chairman replied thereto, stating that a shortage of TNT existed in this country and that therefore nothing should be exported, particularly as this was undoubtedly intended for Germany. The action of the Chairman was approved by the Board.

Cantonment Construction—Building operations at Norfolk and Newport News.—A communication addressed to the Secretary of War, dated July 21st, over the signature of the chairman of
422 this Board, prepared in consultation with Colonel Pierce relative to the above, and the situation in that district, was read and the action of the Chairman approved of by the Board.

Cantonment Construction—Accountant to Check Construction Work.—Mr. Scott reported that he and Colonel Hodgson had held a conference with Colonel Littell and other officers connected with the cantonment construction relative to the misunderstanding which had arisen in regard to the status of the auditor at cantonment sites because of the wording of the original order, particularly the word "supervision."

A conference subsequently had been held with the Secretary of War, with the result that it is now recommended that the Board's action of June 18th, relative to the appointment of such an auditor, be revised to read as follows:

> The General Munitions Board recommends that Major Walter A. Dempsey, Q. M. U. S. R., be appointed as a representative of the Government to check, verify, and account for the expenditures connected with the purchase of material and of other elements of cost entering into the execution of the cantonment construction.

The recommended change was approved and it was ordered that the records be changed accordingly.

Intelligence—Handling of Weekly Reports.—The question as to whether the weekly reports of the subcommittees of the General Munitions Board are being kept entirely secret by the Office of the Director was discussed, and Mr. Scott was asked to go into this matter with the Director and report to the Board.

423 *Shells—8" Common Steel Shell.*—A communication from The Gun Division of the Ordnance Department (File #G.A. 771.34/21), giving prices they had received for furnishing 120,000 of the above, was read.

The recommendations as to the letting of the Contracts were approved of by the Board with the following suggestions:

(1) That there was necessity for increasing the supply of large ammunition.

(2) That in accordance with the wishes of the General Staff it was desirable to develop facilities west of the Alleghenies.

(3) That it was desirable to keep facilities for manufacturing such shells in existence at a number of plants.

(4) That in cases where different prices were quoted for small and large amounts, that the Government should be given the advantage of the lower prices if the amount given to any one concern should be increased at a later time, considering the original and subsequent order as one large order.

(5) That in connection with the cost-plus-percentage bid of the McMyler Interstate Company, that a provision be inserted giving a maximum price which the Government might be asked to pay.

No comparative prices were obtainable, due to the fact that such shells had not been bought for a long period by the Army and Navy, but it was the opinion of Lt. Comdr. Holmes, expressed verbally, that the prices received were exceedingly favorable.

The approval of the Board, together with the above suggestion, was ordered sent to the Chief of Ordnance.

424 *Intelligence—Giving out of Valuable Information by Civilians.*—A communication from General Crozier, addressed to Professor Ames, concerning certain information which he had given

to the press and which might be of value to the enemy, was read for the information of the Board.

Cantonment Construction.—Colonel Hodgson reported that in his opinion, it was likewise concurred in by the Board, that portable houses might be the solution of some of the housing difficulties now before the army. He stated that further investigation would be made.

Copper.—Mr. Meyer reported informally that the copper interests have offered to furnish the Ordnance Department with their immediate needs for copper, but that they probably will not agree to accept the proposed price of 20¢ per lb.

The meeting adjourned at 10:30 A. M.

H. P. BINGHAM, *Secretary.*

425 **Minutes of Meeting of the General Munitions Board held Tuesday, July 24, 1917, at 11 a. m., in the Munsey Building**

Present: General Cruse; General Aleshire; Admiral Capps; Admiral Zane; Admiral Richie; Colonel Fisher; Colonel Dunn; Colonel Hodgson; Colonel Blunt; Major Starrett; Major Woods; Paymaster Hancock; Admiral Rousseau; Colonel Lemly; Major Brown; Major Kelly; Mr. Meyer; Dr. Bogert; Mr. Zimmershied; Mr. Rosenwald; Dr. Simpson; Mr. Rogers; Mr. Howe; Mr. Toulmin; Mr. Ingels; Colonel Pierce; Mr. Scott, presiding; and Mr. Bingham, secretary.

The reading of the minutes of the previous meeting was dispensed with.

Special Meeting.—The Chairman announced that Lord Northcliffe would be glad to meet the members of the General Munitions Board at 10 A. M. tomorrow morning in Room 943, Munsey Building, and expressed the hope that all members of the Board could arrange to be present at that time.

Cantonments—Contractors—National Guard Camp at Palo Alto, California.—Acting upon the recommendation of the Committee on Emergency Construction of buildings and Engineering Structures, the Board recommended that the Lindgren Company of San Francisco, California, be awarded the work at the Palo Alto National Guard Camp. It was ordered that Colonel I. W. Littell be so advised.

Chemicals—Silk for Powder Bags.—A memorandum was presented, dated July 23d, prepared by Mr. Bolton, relative to a
426 shortage of silk for powder bags as required by the Army and Navy. This report was ordered accepted and a copy ordered sent to Dr. Bogert and Colonel Dunn for their information and investigation.

Dr. Bogert reported that the Chemical Committee of the National Research Council was working on a substitute for this material.

Trucks.—Mr. Zimmershied reported relative to the proposed standardized truck that $175,000 had been made available for use in carrying out experiments toward perfecting the standardized truck and that this truck would be manufactured in considerable quantities by March 1, 1918. Upon being asked for a schedule as to exactly what production of the standard truck could be relied upon, Mr. Zimmerschied stated that such figures were not now compiled but that he would have such a report presented within a few days. He stated that the companies with whom the contracts had just now been placed for 10,500 trucks would be kept engaged in United States Government orders for the duration of the war.

He stated also that plans were to now use five different makes and two types, i. e., A and B.

Mr. Zimmerschied further stated that the manufacturers of trucks will be asked to hold themselves in readiness to undertake contracts should the standard truck prove a failure and that even if these companies should fill up their capacity on the business of our allies, that if the United States needed them the factories could be commandeered and forced to give up the business of the allies.

It was the opinion of the Board that such action on the part of our Government would be highly condemnatory, particularly
427 if we assist the foreign Governments in placing orders, and that we should make every plan so that such action on the part of the United States Government would be unnecessary.

Mr. Zimmerschied said that probably the final design of the standardized engine would be completed in 20 days and that it would take only from two to three weeks beyond that time to complete an engine. The necessary tests would consume from five to six weeks further, so that he feels safe in stating that standardized trucks will be manufactured in quantities by March 1, 1918.

It was the opinion of the Board that it was a matter of guess whether this can be done and cannot at this time be substantiated by figures.

Mr. Zimmerschied agreed to this statement of fact and said that he thought that the manufacturers of the accepted models should be given orders which would keep them in operation to be used as "back log" in case standardized trucks were not available.

It was shown that the capacity of the companies to whom orders had just now been given in addition to the foreign orders they now had would, if necessary, give a further capacity of 5,000 trucks during the next ensuing year.

Colonel Pierce stated that it seemed to be the assumption that the warfare next summer would continue to be of the similar fixed-line type as heretofore, and that he thought that the General Staff might not agree that the 10,500 trucks now on order would be a sufficient quantity, and insisted that data must be furnished the Board as to the production of standard trucks possible.

Upon motion by Mr. Rosenwald, seconded by General Cruse, the following resolution was adopted:

428 That whereas the General Munitions Board has been informed as to the contemplated procedure of the Quartermaster General in letting orders for motor trucks to cover the requirements of the Army; and

Whereas it is concerned over the desire of the Department to place orders with makers of accepted trucks for only the immediate requirements of the Army, and is relying for its future requirements upon a standardized type of truck not yet designed or tested: Be it

Resolved, That in the opinion of the General Munitions Board the Quartermaster Department should at once let contracts to cover its full needs for trucks of accepted design as shown by the approved program of army needs.

And also, because of the fact that a standardized truck would make the greatest possible volume of manufacturing facilities available, it is recommended

that the work of standardizing and testing should proceed as rapidly and thoroughly as possible.

Likewise it is requested that Mr. Zimmerschied, Vice Chairman of the Automotive Committee of the Council of National Defense, keep in close touch with the truck situation and report the progress to the Board from time to time.

It was ordered that the views of the Board be presented to the Quartermaster General.

T. N. T.—A memorandum from Mr. Bolton, dated July 23d, bearing on the above subject, and attaching various correspondence relating to the T. N. T. situation, was presented and ordered referred to Colonel Dunn, Chairman of the Committee handling the subject.

Mr. Meyer brought up the need for a central buying agency to cover T. N. T. for the allies and the United States requirements. The T. N. T. Committee was asked to look into this question also and report on Thursday or Friday relative thereto.

Cantonment Construction—Situation at Norfolk and Newport News.—Mr. Scott reported as to what action he had taken to bring about the solution of the building difficulties explained at the above places. His actions in this respect were approved by the Board. Papers covering the plan of procedure and progress were ordered filed.

429 *Intelligence—Leaks through Civilians.*—Mr. Scott brought to the attention of the Board certain information that had been given out by civilians working for the Government, and asked all civilian members of the Board to be particularly careful about this matter, and stated that he would see that the Chairman of each subcommittee was impressed with the importance of secrecy.

Lumber—Reported Delay at Cantonment Sites.—Major Starrett reported that cantonment contractors were being held up because of the delay in receiving lumber.

A communication from Mr. Daniel Willard was read, which stated that lumber should only be shipped as it could be used at the sites. Mr. Rodgers, of the Railway Association, stated that the delay in the procurement of lumber was not due entirely to lack of cars. He stated that sometimes a particular size is needed that is lacking. He also stated that 13,000 cars had been asked for and 7,000 had been furnished, and that there is no cantonment where there is no lumber to be unloaded, and that on Saturday last there were 1,000 cars as yet not unloaded.

The Railway's representatives on the grounds say that no serious delay up to this time has been due to lack of transportation facilities.

Mr. Rogers, Colonel Littell, Mr. Downman, and Major Starrett were appointed a Committee to call upon Mr. Willard to discuss the best means for relieving the present delays.

Intelligence—List needing license for Export to Neutral Countries.—In answer to a request from the Exports Council, the Chairman presented a list of the materials connected with the work of the Board which needed a license before export to neutral countries. This list was approved as presented.

430 *Steel—Necessity for Fixing some Price.*—Mr. Howe brought up the question of the present steel situation as to the holding up of necessary orders, due to the lack of a price. It was reported by the various representatives that practically everything is held up because of the unsettled condition. The Departments reporting are:

The Navy.
Shipping Board.
Ordnance Department (Ammunition steel & rifle barrel steel).
The Panama Canal Commission.

After considerable argument, Mr. Scott and Mr. Rosenwald were asked to interview the Secretary of War and lay the facts before him, registering with the Secretary the opinion of the Board that something must be done promptly as the delay was seriously hampering the preparations for War.

Steel—Prices for Rifle Barrel Steel.—Relative to a price of 13¢ per lb. offered by the Crucible Steel Company for manufacturing rifle barrel steel for the Ordnance Department of the Army, and in answer to a request from the Ordnance Department for advice, the Board moved that the Department be advised that in the opinion of the Board a tentative price of 8¢ per pound be offered the Crucible Steel Company subject to further revision up or down within a certain specified period.

The meeting adjourned at 1:35 P. M.

H. P. Bingham, *Secretary.*

431 Minutes of Meeting of the General Munitions Board held Wednesday, July 25, 1917, at 8:30 a. m., Munsey Building

Present: Colonel Hodgson, Colonel Blunt, Mr. Rosenwald, Colonel Pierce, Paymaster Hancock, Mr. Meyer, Mr. Bolton. Also Major Crowell, Major Little, Major Starrett, Mr. Scott, presiding; and Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Cantonment Construction—Congestion at Newport News and Norfolk.—Mr. Scott reported that at the meeting held yesterday relative to the remedying of the building congestion at the above point it had been finally decided as to the various precedence of the work going on there and that Capt. Holyday, of the Navy, and Colonel Hucheson, of the Army, were given charge to coordinate the work.

Copper.—Mr. Meyer reported that the copper interests would furnish the two million pounds desired by the Ordnance Department. The price to be the same as the final price which will be arranged.

Due to the serious need for immediate action to arrange a final price for copper, it was moved and carried that the Chairman of the Council of National Defense be asked to hold a conference with representatives of the Copper Committee, Raw Materials
432 Committee, Ordnance Department, Navy Dept. and the General Munitions Board to arrange for a final settlement.

Rifles and Small Arms.—A memorandum was presented from Mr. Bolton quoting the Small Arms Division of the Ordnance Department as asking for an opinion as to what action should be taken regarding the use of birch or walnut for gunstocks.

It was moved and carried that the Ordnance Department be advised that in the opinion of the Board it was preferable to continue

to use walnut for rifles for the first million men, in view of the fact that the gunstock wood is already in such condition as not to be available for aviation work.

The meeting adjourned at 9:45 a. m. and reconvened at 11 a. m. o'clock.

Zinc, Antimony, and Lead.—It was brought out that in furnishing lists of requirements the Ordnance Department was sending their requirements by divisions, and the need for receiving combined requirements was clearly defined. It was moved that a letter be addressed to General Crozier asking that an officer be designated to coordinate the demands of the various divisions of his Department and that all information of such character should come to the Board through such officer, whose name General Crozier be asked to furnish the Munitions Board. This, it was felt, would avoid confusion and uncertainty which has surrounded such information previously given.

Machine Tools.—A communication from General Crozier, dated July 20th, 1917 (File 413.6/103), suggesting that a Committee be formed as a part of the General Munitions Board to arrange for the purchase of the machine tools necessary in the existing plants making munitions was presented.

This communication was referred to the Artillery Committee for their study and comment.

Trucks—Purchasing by Chicago Depot Quartermaster.—A communication from the Quartermaster Corps, dated July 21st,
433 explaining the reason for their inquiry for bids covering a limited number of trucks was presented and ordered accepted.

Machine Guns.—A memorandum from Colonel S. E. Blunt, dated July 24th, was presented giving orders placed for Browning-Colt, light and heavy machine guns. This memorandum was ordered made a matter of record.

Mr. Scott stated that it had been reported to him that the Government could not get enough machine guns to meet its needs and asked whether everything is now being done to secure enough machine guns and stating that in his opinion this was not the case.

Major Little stated that he thought everything was done that could be, but that the past sixty days have been lost almost entirely. He also stated that the Marlin Company has not been approached for making of machine guns. He likewise brought out the fact that the Pratt and Whitney Company are making machine tools for Spain, Russia, and China. He said that this should be stopped and all their forces directed to making of gauges for machine guns.

Mr. Little further stated that little or nothing was being referred to the Machine Gun Committee of this Board by the Ordnance Department and that it ought either to be discontinued or given something to do. He intimated that there were six men in the Ordnance Department working on the machine-gun situation.

Production.—The need for an efficient follow-up system for all the Departments was brought out, due to the importance of getting accurate statements as to exactly how the United States stands in handling all supplies.

434 *Projectiles—155 m/m.*—The request from the Ordnance Department recently made that we pass on the prices received on bids covering a quantity of 155 m/m shells was referred to, and it was pointed out that investigations showed that the specifications for

these shells had not as yet been completed and that the Board had heretofore been asked to pass on a price for this article, all the elements of cost of which had not as yet been determined.

It was the opinion that we should not have been asked to pass on this price until all such details had been developed.

Artillery Forgings.—A communication from Colonel Hoffer, of the Gun Division, Ordnance Department, giving the needs for artillery forgings for maintenance and repairs up to June 31st, 1919, was presented and ordered accepted.

Regarding this situation, Major Crowell stated that in order to hold proposed contracts some of these contracts were being turned over to the Navy to undertake navy work, as no action could be obtained from the Army.

Cantonment construction.—Major Starrett reported concerning the situation as to progress being made at the cantonment sites and stated that the cantonments at Yaphank, Admiral, Little Rock, and American Lake are the ones most behind. Some of the others are proceeding entirely satisfactorily. The main source of hold-up is the lumber and car situation.

435 Major Starrett stated emphatically that the Lumber Committee had been of tremendous benefit and was becoming increasingly more so and should by all means be continued.

The meeting adjourned at 1:30 P. M.

H. P. Bingham, *Secretary.*

436 **Minutes of Meeting of Executive Committee General Munitions Board held Thursday, July 26, 1917, at 8:30 a. m., in the Munsey Building**

Present: Colonel Hodgson; Colonel Blunt; Colonel Pierce; Paymaster Hancock; Mr. Rosenwald; Dr. Simpson; Mr. Meyer; Major Starrett; Mr. F. A. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Investigation—Letting of Hand Grenade Contracts.—A communication from Mr. Adelbert Porter addressed to Mr. Catchings, of the Chamber of Commerce of the United States, stating that there had been irregularities in placing contracts for hand grenades, was read. Likewise a report from Capt. Ragsdale, of the Ordnance Department of the Army, was read showing that no orders had as yet been placed.

Mr. Scott was asked to communicate with Mr. Porter and ask him for some definite facts to substantiate his claims.

Storage Committee—Cooperation with Russia.—A communication from Mr. Cook, of the Storage Committee, dated July 25th, together with copy of a letter addressed to him from the President of the Russian Supply Committee dated July 21st in reference to possible cooperation of the Storage Committee with the Russian Supply Committee, was presented, and the Secretary was instructed
437 to advise Mr. Cook that the Board has no power at present to authorize a conference such as to bring about an agreement regarding this matter. If, however, a conflict arises, Mr. Cook will be asked to notify the Board. Should the State Department ask the

Munitions Board to make arrangements, as suggested by Mr. Cook, the Board will be glad to take the matter up.

Lumber—Emergency Dock Construction in France.—A memorandum from Major Kelly and another from Major Rose, of the Corps of Engineers, relating to the reported method the Corps of Engineers had adopted in placing orders for lumber for the above purposes, were read and ordered accepted, and it was ordered that Major Kelly be thanked for the cooperation shown by his Department.

Wire Rope.—A communication from Mr. Bolton, dated July 19th, together with communication of July 19th, from Major Kilpatrick, and of July 16th, from the Wire and Cable Committee of the Advisory Commission of the Council of National Defense, bearing on the subject of the formation of a committee to handle wire and cable, was presented.

It was ordered that the present existing committee be allowed to continue and that nothing further be done at the present moment.

Machine Guns—Aviation Requirements.—It was reported by Mr. Scott that Mr. Coffin had stated that if he could not be assured that the Ordnance Department would supply the Signal Corps with sufficient aeroplane machine guns for their contemplated program, he would arrange to procure them himself.

438 It was requested that Mr. Scott advise General Crozier as to these facts, with a view of placing the situation clearly before him.

Gun Carriages.—A communication from the Ordnance Department of the Army, dated July 20th (File #451.2/1230), asking for confirmation of prices covering 100 1½-ton trailers to be purchased from the Sechler & Company, of Cincinnati, Ohio, was presented and the price confirmed, due to the emergency need.

Tractors.—A communication from the Chief of Ordnance, War Department, dated July 24th (451.2/1223), asking for confirmation of the purchase arrangement contemplated with the Holt Manufacturing Company, of Peoria, Ill., for 1,000 55 H. P. track-laying type tractors, and 80 120 H. P. track-laying type tractors, together with spare parts, was presented and referred to Colonel Pierce and Mr. Meyer with power to act and with a request to report their action to the Board.

Trucks—Ammunition Bodies.—A communication from the Chief of Ordnance, War Department, dated July 20th (File #451.2/1231), asking for confirmation of prices arranged with the Heil Company, of Milwaukee, for 97 steel ammunition bodies, was presented.

It was ordered that the papers be returned to the Ordnance Department, due to the fact that the amount involved is so small that no action from this Board is felt necessary.

Artillery—Forgings.—A communication from the gun Division of the Office of the Chief of Ordnance, War Department, dated July 24th (#G. C. 472.811/120), relative to forging requirements for repairs, was presented and this communication, together with

439 a memorandum from Mr. Bolton, dated July 16th, and also a memorandum from the Gun Division, dated July 11th (G. C. 472 811/37), were referred to the Committee on Army and Navy Artillery for their report and advice as to the present gun-forging situation.

Rifles and Small Arms—Prices for spare barrels.—A communication from the Chief of Ordnance asking for confirmation of prices arranged for with the Avis Company for spare rifle barrels was presented and arrangements confirmed.

Cantonment Contractors.—The recommendation of the Committee on Emergency Construction of Buildings and Engineering Works of the Foundation Company, New York City, was ordered recommended to the Construction and Repair Division of the Quartermaster Department of the United States Army as being the best-equipped contractor to build the New York Depot at Governors Island.

Copper—Brass for Ration Cans.—Confirmation of prices covering a quantity of brass desired by the Ordnance Department for use in making ration cans was presented and the prices confirmed.

Trucks.—A communication of July 25th from the Quartermaster General, asking that authority be given him to purchase 30 motor trucks from each of the seven manufacturers listed for use at the various cantonments in the United States, was presented and such authority granted.

It was the sense of the Board that this action although seemingly necessary, did not coincide with the policy of the Department aiming to standardize the type of trucks for use by the Army.

Storage—Baling.—A report of Mr. Cook, dated July 19th and July 23rd, relative to the need for baling of supplies, was returned to the Board by Colonel Hodgson with a report that he had

440 presented the reports to the Quartermaster General.

Chemicals—Ypaliene.—Clearance was granted the Navy on a quantity of the above as per request of Paymaster Hancock.

The meeting adjourned at 10:30 A. M.

H. P. Bingham, *Secretary.*

441 **Minutes of Meeting of the Executive Committee of the General Munitions Board held Friday, July 27, 1917, at 8:30 a. m., in the Munsey Building**

Present: Colonel Pierce; Colonel Hodgson; Colonel Blunt; Paymaster Hancock; Mr. Rosenwald; Dr. Simpson; Mr. Summers; Mr. Meyer; Mr. Teele; Mr. Bolton; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Inventions—Cooperation with British.—A communication from Mr. Brand, of the British Ministry of Munitions in the United States, concerning cooperation between the Inventions Department of the British Ministry and a board to handle munitions inventions for this Government, was presented.

The opinion of the Board was that such an arrangement would be very valuable. No action, however, was taken.

Machine Guns.—A report from Major Little, dated July 25th, to the Chief of Ordnance, concerning the manufacture of Browning-Colt Machine Guns, was read for the information of the Board.

Steel—Wolfram Concentrates.—A communication from the State Department, bearing on the need for importing additional Wolfram Concentrates from Buenos Aires, was presented and referred to Mr. Summers for action.

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442 *Investigation—Exemption of Employees.*—A communication dated July 26th (G. O. #18) from the Director, stating that all claims for exemptions for employees because of work in the Council of National Defense must be referred to the Director, was read for the information of the Board.

Cantonment Construction—Letter of Thanks.—Draft of letters to be sent to Mr. Howard Rogers, Mr. Fuller, and Mr. Metcalf, who had assisted the Emergency Construction Committee in their work with Colonel Littell, were approved with minor changes and ordered sent with a copy addressed to Colonel Littell.

Trucks.—A communication from the Quartermaster General, #451.2/ST dated July 26th, and stating that in accordance with request of the Board of July 24th, certain additional trucks of accepted design had been ordered, was presented for the information of the Board.

Cantonment Construction—Auditors at Sites.—Mr. Teele stated that the order of the Secretary of War dated July 24th, concerning the handling of the auditing at cantonment sites had not carried out the recommendations of the Accountancy Committee and the Board, and that confusion still existed.

He also stated that certain auditors had sent in telegrams stating that unless conditions were remedied that they would leave at once.

The idea was that the auditor should report direct to Colonel Littell, but that the Quartermaster in charge of each cantonment had received such reports.

The following draft of a telegram to be sent by Colonel Littell to the various officers in charge of the Cantonment Constructions to cover the situation was prepared by Mr. Teele and approved by the Board:

443 The Division Auditors have full authority over all accounting methods and over their own staff, both in engaging and discharging same, and are responsible and must report directly to this office in the fulfillment of their duties. They come under the disciplinary rules of the Cantonment and are to cooperate with you in every way to the end that the work be not delayed.

Mr. Teele and Colonel Hodgson were asked to confer with Colonel Littell, with a view to straightening this out.

Steel—Price of Sheet Steel.—A communication from the Chief of Ordnance, dated July 26th (File E. 426.5/64), asking advice as to price that should be paid for a quantity of sheet steel for use in the manufacture of spoons and forks, was presented.

It was the opinion of the Board that the price quoted the Ordnance Department was too high and the Secretary was instructed to so advise the Chief of Ordnance, with a suggestion that no more should be paid than was paid in April, and likewise that he should refer to the order of the Secretary of War, which stated that no steel was to be bought except at a tentative price subject to revision at a later date. However, the Board recommended that orders for this material should be placed.

Paint—Revision of Paint Specifications.—A communication from the Chief of Ordnance, dated July 24th (File 411.6/175), relative to a suggestion that paint specifications be revised and concurring in such action, was presented. This was ordered referred to Mr. Bolton to arrange for a conference to cover this subject.

444 *Oil—Price of Fuel Oil.*—A communication from the Chief of Ordnance, dated July 25th (File G. A. 471.23/225), attaching two letters from the American Can Company relative to the price of 7¢ which they are asked to pay for fuel oil, was presented. It was the opinion of the Board that while it might be possible to get a reduction in the price of oil for this one order, nothing could be done until the general price situation has been settled.

Copper.—A communication from Mr. Meyer, dated July 26th, stating that he had arranged for the balance of requirements of copper for the Ordnance Department for the month of August, making a total of 8,000,000 pounds, was presented for the information of the Board.

Optical Glass—Aiming Circles.—A communication from the Chief of Ordnance dated July 25th (File 413.68/83), asking for confirmation of prices on 2,000 aiming circles for delivery during the calendar year 1918 to be furnished by the Spencer Lens Company, was presented.

It was moved and carried that the price be approved and that the contract be entered into on the above basis.

The meeting adjourned at 10:30 A. M.

H. P. Bingham, *Secretary.*

445 Minutes of Meeting of the Executive Committee, General Munitions Board, held Saturday, July 28, 1917, at 8:30 a. m., Munsey Building

Present: Colonel Pierce; Colonel Blunt; Colonel Hodgson; Paymaster Hancock; Mr. Meyer; Mr. Rosenwald; Dr. Simpson; Major Starrett; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Investigation.—A telegram from Mr. Rosenwald to the President bearing on the rider which was to be attached to the Food Bill relating to the employment of men in an advisory capacity, and regarding such men interested in companies receiving orders, was read and a copy of this telegram, together with the President's letter to Senator McKellar on this subject, was ordered made a part of the record.

National Army.—Colonel Pierce presented copy of a report from the Quartermaster General to the General Staff, stating that it was his opinion that the National Army should not be called until October 1st, because of lack of equipment, and attaching a list of certain material of which he considered there would be a shortage. Similarly, a letter was presented from the Quartermaster General addressed to the Council of National Defense asking that contractors be assisted insofar as possible to complete their contracts
446 according to their agreement, and referring to the main trouble, seemingly labor; also requesting that care be exercised in not giving companies orders for more material than they can take care of.

Mr. Rosenwald stated that in his opinion all but blankets could be arranged for if in some cases it was permitted to furnish material not entirely up to standard specifications.

Mr. Scott stated that the Quartermaster's report states that there will be a shortage and does not call attention to the fact that the original requirements of the army as given the Supplies Committee were taken care of, but that these supplies were broken into on account of the unforeseen need which had developed.

Relative to the blankets, it was the opinion that nonregulation blankets could be procured to meet the emergency, and when the regulation blankets were procured these others could be turned over to the Medical Department.

Mr. Rosenwald was asked to report (1st) whether orders placed for this material can or cannot be expedited; (2nd) whether enough material to meet the emergency could be procured outside of contracts for standard articles.

Colonel Pierce suggested that a propaganda of patriotism such as instituted by the Navy to increase production be used in expediting these supplies.

It was thereupon moved and carried that the Chairman call upon the Secretary of War and state that it is the opinion of this Board that, insofar as the supplying of the equipment referred to in the Quartermaster General's memorandum is concerned, and from the knowledge the board has, the board can see no justification in
447 the putting off of the date for the mobilization of the National Army further than September 1st, 1917.

National Army—Blankets, Shirts—Medical.—It was moved and carried that Dr. Simpson be requested to confer with Dr. Frankl Martin and the Surgeon General of the Army with a view of obtaining an official memorandum from the Surgeon General saying that one blanket is all that is needed for troops in the southern camps during September and October, and that cotton shirts are better than wool for the man in those camps for the same period.

Dr. Simpson was likewise requested to obtain a report as to just what the blanket situation is in the Medical Corps.

Medical.—It was the opinion of the Board that publicity should be given the method which would be employed in the treatment of the conscripts upon their arrival at the camps and what might be of advantage to the men to bring with them.

This matter was referred to Dr. Simpson for report.

Lumber—Birch for Gun Stocks.—Relative to a communication of July 27th from the Aircraft Production Board stating that the price of 90¢ for red birch gun stocks, as given by the Ordnance Department, is too high, the Secretary was instructed to obtain the specifications for this wood and submit same to the Aircraft Production Board for further information.

Trucks—Tractors.—A communication from the Ordnance Department, dated July 27th (no file No.), regarding the increased number of low-power, track-laying tractors inquired for July 25th, the increase being from one thousand to fifteen hundred, was presented.

448 It was moved and carried that this matter be referred to Mr. Bulkley to confer with Colonel Blunt and report today to the Ordnance Department his recommendation to include:

1. The phrase " or part thereof " to be added to the scale of percentage of savings mentioned in paragraph 2, Sec. B of their letter.

2. That the price be approved in case it is not possible to persuade the Holt Company to accept penalty for costs higher than those estimated.

3. The statement that it is assumed by the Board that the estimated cost has been carefully gone into by the Ordnance Department and found to be in their judgment approximately correct.

4. That the Holt Company be asked to furnish a list of the iron, steel, copper, and aluminum required to complete this order, and likewise the prices they have used for these articles in figuring their cost.

Medical—Surgical Dressing Contracts.—It was moved and carried that the modifications suggested by the Legal Committee for the standard form of contract for surgical dressings be approved.

Lead—For Shrapnel Balls.—A communication dated July 25th (G. 470.1/45) relative to change in specifications for shrapnel balls and asking for advice was received and ordered referred to the National Research Council for investigation and report.

Lead—Signal Corps Requirements.—A communication from the Chief of Ordnance (R. 470.1/28) asking that the Signal Corps' requirements for lead, 215 tons, be procured through the supply
449 set aside for the Ordnance Department, was presented and ordered approved, and referred to the Raw Materials Committee.

Machine Guns.—A memorandum dated July 27th, from Colonel Blunt of the Ordnance Department, stating that orders for 12,000 Lewis Machine Guns had been placed, together with 865,000 magazines, 12,000 magazine loaders and 12 sets of base spare parts, with the Savage Arms Corporation, was presented.

Further, he stated that the orders now placed contained the following clause:

> The question of price to be paid for the material has been submitted to the General Munitions Board of the Council of National Defense with request for recommendation as to what price the Board considers fair and just.

This was referred to the Machine Gun Committee for report.

Machine Gun Committee.—The question as to the advisability of adding a civilian member to this committee was discussed and the matter referred to the Machine Gun Committee for advice.

Cantonment Contractors—Type of Recommendation.—It was moved and carried that in all future recommendations for contractors to do emergency building or similar work, the committee on Emergency Construction of Buildings and Engineering Works include the names of at least two contractors who would be considered well equipped to complete such work, so that the contracting officer if disinclined to place the contract with the committee's first choice, might have another recommendation before him.

Cantonment Contractors.—The Committee on Emergency Construction of Buildings and Engineering Works presented two recommendations of contractors to build aviation warehouse, one at Richmond, Va., and another at Harrisburg, Pa.

450 It was ordered that the Board delay its recommendation to the Signal Corps until it had laid before it the aviation building program in order that further coordination of contemplated building might be brought about.

Cantonment—Contractor—Quartermaster Training Camp at Manassas, Va.—The recommendation of the Committee on Emergency Construction of Buildings and Engineering Works, recommending that the George A. Fuller Company of Washington, D. C., undertake the buildings of the above camp, was presented. This recommendation was approved subject to the amendment that to the recommendation be attached.

(1) Letter from the Marine Corps recommending the George A. Fuller Co.

(2) Letter from the Quartermaster's Department asking that a particularly trained builder be recommended and showing the particular training and adaptability of the George A. Fuller Company to this work.

(3) That the George A. Fuller Company be asked to take this additional business amounting to about $2,000,000 at a profit of 5% and subject to the deduction as set forth in the standard form of contract to cover this work.

Optical Glass—Clearance for Navy.—The following requests for clearance were granted, covered by:

(1) Requisition #120—Washington Navy Yard—binoculars and telescopes.

(2) Requisition #297—1918, Bureau of Ordnance—Telescope Sights.

(3) Requisition #R. 277—1918, Telescope Sights—Bureau of Ordnance.

(4) Requisition #R. 295—1918, Bureau of Ordnance—Gun Sights.

451 *Chemicals Clearance.*—Clearance was granted the following:

(1) Requisition 163—1918, Bureau of Ordnance—smokeless powder and packing bags.

(2) 5,000,000 Yds. Heavy silk cartridge-bag cloth.

(3) 1,000,000 yards light silk cartridge-bag cloth desired by the Bureau of Ordnance.

The meeting adjourned at 12:15 M.

H. P. BINGHAM, *Secretary.*

451a Copy of a telegram forwarded July 2nd, 1917, to President Woodrow Wilson at the White House, Washington, D. C., from Mr. Julius Rosenwald:

DEAR MR. PRESIDENT: It is of the most vital importance that the rider in the Food Bill referring to the Advisory Commission and its method of securing supplies be stricken out. To cast suspicion on men in many industries who without exception have been eager to serve the Government rather than themselves will destroy a spirit which should be encouraged. The Committees representing these industries have succeeded in instilling and securing a loyalty to the Government from many in their own lines that could never have been produced under the old system. Even at this early stage of the war the savings to the Government due to this desire to serve runs into many tens of millions of dollars. Having been intrusted with a responsibility to protect and serve their Government interests a patriotism has been aroused in these men which is absolutely necessary to secure rapid production. It is probably impossible to devise any plan which is dishonesty proof, but any man of standing in his profession or industry will sacrifice everything rather than be unfaithful to his trust. At any rate, such has been my experience with the men who have served as Advisors to the Commission which I have had the honor to appoint. The present system should not be destroyed until a better one is found. If changes in method are desirable, they can be made after proper investigation. It is vital that the cooperation which has already been established should be maintained, and furthermore, it is of greatest importance that confidence exist between Government and Industry and that suspicion which has existed on the part of both be eliminated.

(signed) JULIUS ROSENWALD.

452 Minutes of Meeting of Executive Committee of the General Munitions Board held Monday, July 30, 1917, at 8:30 a. m., Munsey Building

Present: Colonel Pierce; Colonel Blunt; Colonel Hodgson; Paymaster Hancock; Dr. Simpson; Major Starrett; Mr. Meyer; Mr. Rosenwald; Mr. Bolton; Mr. Scott, presiding; and Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Zinc and Antimony.—A communication dated July 27th, from Mr. Meyer, relative to the centralizing of the raw materials requirements of the Ordnance Department under one officer, was presented for the information of the Board. It was further reported on this subject that the Ordnance Department had appointed such an officer, who was about to assume such duties.

Lead.—A communication from Mr. Meyer, regarding the method to be pursued in obtaining the lead requirements for the various Departments, was presented for the information of the Board.

Gun Carriages.—A communication from the Chief of Ordnance (C. S. 473.16/2) relative to the placing of an order for certain
453 gun carriages with the Morgan Engineering Company, Alliance, Ohio, and the treatments to be employed, was presented. The proposed arrangement was approved by the Board and this approval was ordered sent to the Chief of Ordnance with a statement that the Board appreciates the needs of the Department proceeding in this matter with all speed.

Machine Guns.—Formal notice of the placing of orders for 12,000 Lewis Machine Guns from the Chief of Ordnance, dated July 26th (File #472.504/43), was presented and ordered referred to the Machine Gun Committee.

Army Requirements—Stoves and Heaters for Cantonments.—A communication from Mr. Willis Compton of the Federal Trade Commission, dated July 27th, concerning the specifications for stoves and heaters for use in the cantonments, and suggesting possible errors in the specifications, was ordered referred to Colonel Hodgson for attention.

Cantonment Construction—Portable houses.—Major Starrett read a report covering the above subject, in main stating that the portable houses are not as portable as they appear and that he would not advise their being used to any large extent in the United States, but that they might be used for emergency work. He reported that he thought they might be of advantage in France and for this reason he believed it advisable for a quantity of these houses to be built at once.

This report was ordered referred to Colonel Pierce and a copy to Colonel Hodgson.

454 *Labor.*—A communication from the Secretary of War to Major Starrett, in connection with the policy to be followed in employing labor for cantonment construction, was read for the information of the Board, and was retained by Major Starrett.

Cantonment Contractors—Quartermaster Training Camp at Manassas, Va.—Supplementing instructions regarding the recommendation for contractor to build the above camp, acted upon by the Board on July 28th, it was ordered that the suggestion to Colonel Littell concerning the percentage of profit to be allowed the George A. Fuller Company for this work should originate as a part of the Board's recommendation and should not originate from the Committee on Emergency Construction, this to relieve said committee of any responsibility in connection with the rate of compensation to be allowed a contractor.

Steel—Sheets desired by Ordnance Departments.—A communication from the Chief of Ordnance, dated July 25th, relative to a price to be paid the American Sheet and Tin Plate Company for 795,000 lbs. of soft sheet steel, and asking whether the prices offered were fair and just, was presented and the Board requested that the Chief of Ordnance place the order, but that the price could not now be determined and would not be determinable until the price policy is settled by the President.

Priority—Action of Pierce Arrow Company.—A proposed letter to the Pierce Arrow Company, prepared by Mr. Meyer, expressing the appreciation of this Board over their action in discontinuing the manufacture of pleasure cars and concentrating all their production on the manufacture of trucks for the United States and its Allies, was presented, approved, and ordered sent.

455 *Aluminum.*—A communication dated July 24th, from Mr. Bolton, relative to the price used by truck manufacturers for aluminum in their recent bids, was presented and ordered referred to the Quartermaster General.

Priority—Planers for Japan.—A wire addressed to the Secretary of War by the Hamilton Machine Tool Company, referred to this Board for action, dated July 24th, asking whether they should quote on 30 planers desired by the Japanese Government, was presented, and it was ordered that a reply be made to the effect that in the opinion of the Board the capacity of that company will probably be needed by the United States Government. The Board feels justified in making this reply particularly because the urgency of the demand in Japan is not known to the Board.

The meeting adjourned at 10:30 A. M.

H. P. Bingham, *Secretary.*

456 Minutes of Meeting of the General Munitions Board held Tuesday, July 31, 1917, at 11 a. m., Munsey Building

Present: Commander Leigh, Admiral Rousseau, Admiral Capps, Admiral Zane, Colonel Lemly, Colonel Pierce, Paymaster Hancock, Colonel Hodgson, Colonel Fisher, Colonel Blunt, General Cruse, General Aleshire, Major Kelley, Major Little, Major Starrett, Dr. Martin, Admiral Richie, Mr. Bulkley, Dr. Simpson, Mr. Toulmin, Mr. Cravell, Mr. Vauclain, Mr. Coffin, Mr. Ingels, Mr. Teele, Mr. Sterrett, Mr. Cooke, Mr. Eisenman, Mr. Bolton, Mr. Summers, Mr. Meyer, Mr. Zimmerschied, Mr. Rosenwald, Admiral Mason, Mr. Scott, presiding, and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

General Munitions Board.—The Chairman stated that this was probably the last meeting of the General Munitions Board but requested that the various subcommittees continue their work as though no change was contemplated. He stated that the work of the General Munitions Board had ended, because the Secretary of War and the Secretary of the Navy have named one officer each as representing all departments of their respective branches together but that the officers detailed to the General Munitions Board are still detailed to the work the Board has been doing until otherwise advised.

457 Admiral Capps congratulated the Board and the country as a whole on the selection of Mr. Scott as the man to undertake the handling of the War Industries Board. He said that he not only had a high regard and personal affection for Mr. Scott, but that he knew that the good will and support of those who had had the privilege of working with him would follow Mr. Scott in the new work.

Admiral Capps then thanked the members of the Board for the support they had given him in his new work as General Manager of the Emergency Fleet Corporation.

Mr. Scott said that he felt deeply the service the Board had rendered to the Government and that he wished to impress upon the members of the Board that all the success the Board had had was due to the Board as a whole and not to anyone's particular efforts. He laid emphasis upon the services rendered by all the civilians connected with this work and said that the services rendered could never be fully understood by the people at large. His opinion was that the military departments should be developed to a point where they would be able to handle similar situations unaided for all times. This he felt sure would be done in spite of the difficulties encountered during the last three months. Lastly, he expressed his affection for all members of the Board and wished the Board to realize the tremendous regard he had for the work done.

Lead—Clearance—Signal Corps.—Clearance was granted the Signal Corps on a quantity of lead desired for August, September, and October delivery.

TNT—Reported shortages.—A report from the TNT 458 Committee making certain recommendations was read and ordered referred to the War Industries Board for their action.

National Army—Equipment.—Mr. Eisenman reported on the equipment for the National Army to be called on September 1st, 1917, the figures given based on 1,315,000 men. In main, all the necessary equipment he reported as being available on that date. Blankets, in which a probable shortage of 650,000 would exist, could, he said, be taken care of if a substitute grey blanket could be used.

He stated that the men who have already drawn their equipment have been allowed to purchase more supplies than the regulations called for, and this has resulted in the original estimates being somewhat under the present requirements. Certain suggestions were made, which Colonel Pierce was asked to put in the form of a communication addressed to the Chief of Staff, which would tend to do away with any possible shortage in any of the items necessary.

It was moved and carried that the General Munitions Board recommend to the Quartermaster General that he instruct the Committee on Supplies to purchase 650,000 substitute all-wool blankets.

Mr. Rosenwald said that instructions must be issued giving the shipping point of all this material, so that there would be as little delay as possible in distributing. Mr. Scott pointed out that
459 the Committee on Supplies had accomplished the seemingly impossible in arranging for the securing of these supplies to be delivered on time.

Storage.—A communication from the Storage Committee, dated July 31st, together with a copy of a letter from the Storage Committee to Brig. Gen. H. G. Sharpe, dated July 30th, and a further report from Mr. M. L. Cooke, Chairman of the Storage Committee, of July 30th, all bearing on the advisability of placing a storage warehouse on Governors Island, was considered by the Board and ordered referred to Colonel Pierce, with power to act.

It was likewise suggested that Colonel Pierce arrange that the Quartermaster General be instructed to place one officer in charge of all storage matters coming under the jurisdiction of his department, with a view of centralizing all such work in his department.

Storage—Congestion at Newport News.—A report from Mr. M. L. Cooke bearing on the building congestion at Newport News, and particularly relating to the storage buildings there, was read and referred back to Mr. Cooke, with the request that he make a complete report as to what the situation regarding storage is at Newport News at the present time.

Aviation.—Mr. Coffin addressed the Board on the subject of the Aircraft Program, pointing out the difficulties they were encountering and particularly calling attention to the need for cooperation in aircraft production among the Allies.

General Munitions Board.—Mr. Scott stated that the Executive Committee of this Board would continue to meet, for the
460 time being, at least, as usual. He expressed in highest terms the valuable service Colonel Pierce and Paymaster Hancock had rendered as members of the Executive Committee and stated that Colonel Pierce had been appointed a member of the War Industries Board and would, therefore, continue his good work in the new organization; whereupon the Board registered a vote of regard and appreciation for the excellent work which Paymaster Hancock had rendered, which was in addition to all his other activities connected with the Navy.

The meeting adjourned at 12:45 P. M.

H. P. BINGHAM, *Secretary.*

461 Minutes of Meeting of the Executive Committee, General Munitions Board, held Wednesday, August 1, 1917, at 8:30 a. m., Munsey Building

Present: Colonel Pierce; Dr. Simpson; Colonel Hodgson; Paymaster Hancock; Colonel Blunt; Mr. Bolton; Mr. Scott, presiding; and Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

National Army.—Dr. Simpson reported verbally that the Surgeon General will probably authorize that one blanket only is necessary for conscripts at the southern camps during September and October and that likewise cotton shirts in these camps for the same period will be satisfactory.

National Army—Treatment of Conscripts.—Dr. Simpson reported verbally that the Surgeon General will be willing to give publicity to treatment which conscripts will receive when entering concentration camps and what would be beneficial for the conscripts to bring with them to the camps.

Machine Guns—Prices for Lewis Guns.—A report from the Machine Gun Committee, dated July 31, relative to the above was read and ordered received.

Chemicals—Power at Niagara for Producing Electrodes.—A communication dated July 31st from Mr. Meyer, attaching com-
462 munication of July 31 from Paymaster Hancock and other correspondence relative to the need for electrodes at the plant of the Noble Electric Steel Company and the lack of power at Niagara for manufacturing electrodes was presented and ordered referred to the War Industries Board, with the recommendation that arrangements be made for a committee, composed of engineers and chemists, to investigate the present distribution and to prepare an estimate of the probable needs of power, be appointed, and also that permission be secured from the State Department to confer with the Canadian authorities on this subject.

Artillery Forgings—Machine Tools for Plant Extensions.—A communication from the Committee on Army and Navy Artillery, dated July 27th, bearing on the arrangements suggested by the Ordnance Department for securing a favorable price on such machine tools as are required at the plants who are extending or building factories for the manufacture of artillery, was presented and ordered referred to Mr. Brookings, of the War Industries Board, with the suggestion that he talk with the National Association of Machine Tool Builders.

Leather—Method of Purchasing.—A communication dated July 28th from Mr. Rosenwald, attaching communication addressed to him from a member of the Leather Committee, calling attention to the possible waste which was going on due to the method the Ordnance Department was pursuing in procuring its leather requirements, was presented and was referred to the War Industries Board for reference to Colonel Babbitt, the name of the sender having been left off the copy to be submitted to Colonel Babbitt.

Army Equipment—Shipment of Shoes and Cotton Goods.—Communication from the Committee on Supplies, dated July 31st,
463 relative to a means of expediting the delivery of certain shoes and cotton goods from companies as listed, was ordered referred to Mr. Hodges, of the American Railway Association, with the instruction that the Board approve of the action recommended.

Steel—Quality for British.—A communication dated July 25th, from the British Ministry to the Munitions of War in the United States, asking that the General Munitions Board should use its influence in raising the quality of the shell steel being shipped to England, was presented. This communication was ordered referred to the War Industries Board, with a request that a conference of steel manufacturers be called to accomplish the desired result, if possible.

National Army—Clothing Equipment.—A proposed form of letter, to be sent to the General Staff relative to having on hand on September 1st, 1917, enough supplies to call out the National Army, was presented and approved for transmission.

Optical Glass.—Clearance was given the Navy on requisition 306–1918 covering the quantity of the above.

Chemicals—Ammonia Picrate.—Clearance was given the Bureau of Ordnance on quantity of above covered by their requisition No. 385.

The Meeting adjourned at 10:30 a. m.

H. P. BINGHAM, *Secretary.*

464 **Minutes of Meeting of Executive Committee of the General Munitions Board held Wednesday, August 2, 1917, at 8:30 a. m., Munsey Building**

Present: Mr. Meyer; Colonel Blunt; Colonel Hodgson; Mr. Rosenwald; Paymaster Hancock; Dr. Simpson; Mr. Bolton; Mr. Scott, presiding; and Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Investigation—Adelbert Porter.—A form of a letter for transmission to the above in connection with his recent suggestion that there have been some irregularity in the handling of hand-grenade contracts was read and ordered sent.

Projectiles—6″—American Radiator Company's plant in France.—A communication from the Chief of Ordnance, No. G. A. 400.153/171, dated July 28, in answer to the question as to whether the Ordnance Department could use the American Radiator Company's plant at Dole, France, for the manufacture of 6″ shells, and stated that this plant could not now be used, was read and ordered referred to Mr. Bolton, with instructions to send copy of this letter to the American Radiator Company and to see to it that Colonel Williams, acting Chief of Ordnance in France, be notified as to this plant.

465 *Gun Carriages—Recoil Springs—Railway Steel Spring Co.*—A communication from the Chief of Ordnance dated July 28, No. 473.1/125, asking for clearance of an order for such springs to be placed with the above company was presented and it was ordered that the Ordnance Department be advised that the Board sees no reason why this order should not be placed, as the prices appear to be satisfactory to the Ordnance Department.

Small Arms—Lebel Bullets.—A communication from the Chief of Ordnance relative to the procurement of 50,000,000 Lebel bullets for machine guns in France was presented and it was ordered that the Ordnance Department be advised that the Board recommend that the contracts be placed as suggested, at the most advantageous price obtainable.

Lumber—spruce requirements—Aircraft Board.—A communication from Mr. Bolton with certain enclosures from the Lumber Committee relative to the need for cooperation between the Aircraft Board and the Lumber Committee in obtaining the necessary supply of spruce was presented and the following motion, after being duly moved and seconded, was unanimously adopted:

> It is the General Munitions Board's decision that the Aircraft Production Board for its lumber requirements should cooperate with the Lumber Committee of the General Munitions Board and should not work separately.

It was ordered that a copy of this motion be sent to the Aircraft Production Board and to the Lumber Committee.

Lumber—Hardwood situation.—A communication from Mr. Bolton dated July 26th, attaching communication from the Lum-
466 ber Committee bearing on above subject, was presented and it was moved and carried that upon recommendation of Mr. Downman, Chairman of the Lumber Committee, the Board authorize the formation of a Committee to cover the hardwood lumber situation, the personnel to be suggested by Mr. Downman.

Cantonment Construction—Auditors at Cantonment.—Communication dated July 27th from Col. I. W. Littel stating that instructions had been given the constructing officers at the cantonment sites clearing up the positions of the auditors was presented for the information of the Board.

Machine Gun—Marlin Arms Company.—Mr. Bolton reported on the situation of the Marlin Arms Company relative to their availability to manufacture machine guns in the plant of the Hopkins & Allen Arms Company, and in connection with this the situation relative to the $3,000,000 which the Belgian Government desired to borrow from the United States. Mr. Bolton was asked to get a letter from the Marlin Arms Company covering this situation and also to ascertain whether the Belgian Government desired the above money to be used for the purpose of finishing the rifle order which the Hopkins & Allen Co. had.

The meeting adjourned until 10:00 a. m.

H. P. BINGHAM, *Secretary.*

467 **Minutes of the Meeting of the General Munitions Board held Friday, August 3, 1917, at 8:30, Room 945, Munsey Building**

Present: Paymaster Hancock; Colonel Hodgson; Colonel Blunt; Mr. Rosenwald; Mr. Meyer; Mr. F. A. Scott, presiding; Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

National Army—Shoes.—Mr. Rosenwald stated that a sufficient number of lasts had not been delivered by the Quartermaster's Department to shoe manufacturers. This action on the part of General Smith had delayed delivery of the necessary shoes.

For the information of the Board, a communication from Mr. Rosenwald dated July 31st, addressed to General Sharpe, making certain recommendations as to lasts and leather specifications was read and discussed.

Optical Glass—Clearance.—A quantity of optical glass desired by the Navy covered by requisition 309–1918 was cleared.

Chemicals—Picric Acid.—A quantity of Picric acid desired by the Bureau of Ordnance covered by requisition 209 was cleared.

The Meeting adjourned at 9:30 A. M.

H. P. Bingham, *Secretary.*

468 **Meeting of the Executive Committee of the General Munitions Board, called at 8:30, Monday, August 6th, 1917, Munsey Building**

Present: Colonel Pierce; Colonel Blunt; Mr. Bolton; Mr. Rosenwald; Mr. Meyer; Mr. F. A. Scott, Chairman; Mr. H. P. Ingels, Acting Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Artillery Wheels—Royer Wheel Co., Aurora, Indiana.—Memorandum, dated August 2, 1917, from the Ordnance Department regarding the placing of an order for 6,000 56″ artillery wheels to be furnished by the Royer Wheel Company, of Aurora, Indiana, the Board was of the opinion that the price of $15 each (government furnishing materials) is fair and just.

Artillery Wheels—Metal parts for 30,000 wheels.—Memorandum. dated August 4, 1917, from the Ordnance Department giving prices submitted by the Wagner Electric Company for metal parts for 30,000 wheels was submitted to the Board. It was the opinion of the Board that the prices were fair and just and that orders should be placed with the Wagner Electric Company for furnishing same.

Leather—russet bag—Proposals submitted by W. D. Byron & Sons, Inc.—Memorandum, dated July 27th, 1917, from the Ordnance Department submitted to the Board. Attention was called
469 to the fact that the W. D. Byron & Sons, Inc., has quoted prices of 48¢ and 46¢ on A and B selections for russet bag leather. Last previous purchasing price was 45¢ and 43¢ for A and B selections. This was ordered referred to the War Industries Board.

Shoes (Lasts for).—Memorandum dated August 2, 1917, from Major Hardeman listing the number of lasts on hand on June 30th, 1917, at the various depots was submitted to the Board and ordered referred to Mr. Rosenwald with the request that he investigate and, if necessary, report back to the Board.

Death of Colonel Hodgson.—The Board was advised of the death of Colonel Hodgson. Colonel Blunt and Mr. Scott were requested to draft a resolution to be sent to Mrs. Hodgson over the signature of the General Munitions Board expressing the high regard in which the members of the Board held Colonel Hodgson and their sorrow at his loss. The following resolution was accordingly presented and approved (see next page).

Shoes.—Mr. Rosenwald called attention to certain government lasts held by one of the shoe companies of the Sears, Roebuck & Co., and stated frankly that he did not even wish to suggest that orders be placed with this company, but that he did want to advise the Board of this capacity so that in event the Government needed it they would be very glad to furnish the shoes at the present going prices. Referred to Colonel Pierce for the attention of the War Industries Board.

469a Memorial Adopted by the General Munitions Board, Council of National Defense, Monday, August 6th, 1917

At the time of the organization of the General Munitions Board in April 1917 Colonel Frederick Grady Hodgson was assigned to service with it as one of the representatives of the Quartermaster General's Department. From that time until his decease in August 1917 he was in daily attendance at Board meetings and in constant and familiar contact with the members of this body.

His high sense of honor and duty, his faithfulness in the discharge of those subjects under his direction, and his intelligence and experience enabled him to render invaluable services to his country as a member of this Board; and with all this his cheerful and equable disposition, his courage and hopefulness, and his broad views of trying and difficult questions were a constant source of encouragement and stimulation to his associates.

This brief record of the services of this noble and kindly gentleman and soldier and of our regard for him is made as a memorial to his worth and as an evidence of our deep and sincere sympathy with those whose lives are saddened and whose personal loss is great indeed.

Julius Rosenwald,
F. A. Scott,
Committee.

470 *Artillery Forgings.*—Attention of the Board was called to the question of the distribution of forgings to the Midvale Steel Company and the Bethlehem Steel Company, particular attention being called to the plan of Midvale furnishing the Navy forgings and the Bethlehem Steel Company furnishing the Army forgings. Mr. Scott referred to an understanding with these two companies, that each of them was to furnish Army and Navy forgings at a certain fixed price, this price being based on the Navy forgings being divided equally between them. He stated that he did not believe Bethlehem would agree to accept only Army forgings at the prices agreed upon.

Reference was made to the recent order from the Bureau of Ordnance of the Navy Department placed with the Midvale Steel Company for 16 8″ howitzer units for the Marine Corps. No definite

action was taken on this. However, a memorandum from the War Industries Board was sent to the Bureau of Ordnance of the Navy Department requesting information as to when this order was placed and for an explanation as to why they failed to have these howitzers cleared from this Board.

Artillery Forgings—United Engineering & Foundry Co.—Colonel Blunt called the Board's attention to the fact that the above Company had refused to bid on certain forgings, such refusal based on the Government eight-hour law. After some discussion it was decided to drop the matter.

Meeting adjourned at 10:10 A. M.

H. P. INGELS, *Acting Secretary.*

471 **Meeting of the General Munitions Board held Tuesday, August 7, 1917, at 8:30 a. m., at 945 Munsey Building**

Present: Mr. Rosenwald; Col. Blunt; Dr. Simpson; Col. Pierce; Mr. Bolton; Mr. F. A. Scott, presiding; Mr. H. P. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Projectiles—4.7″.—A communication from the Chief of Ordnance, dated August 4th, No. G A 471.15/105, relative to the placing of contracts for 4.7 shells, was read and referred to Mr. Brookings, of the War Industries Board.

Gun Carriages—Artillery Wheels.—A communication from the Chief of Ordnance, dated August 6, 473.817/256, asking whether a contract for 10,000 56″ artillery wheels and 3,600 60″ artillery wheels should be placed with the Archibald Wheel Company, of Lawrence, Mass., at a price given was presented. After consideration it was the Board's opinion that the contract as stated should be placed, and the secretary was ordered to so advise the Chief of Ordnance.

Artillery Forgings—Need for additional appropriations.—Upon a discussion of the money available for the placing of additional artillery forging contracts, it was moved by Mr. Rosenwald, seconded, and duly carried, that the General Munitions Board suggest to
472 the War Industries Board that they appear before the Appropriation Committee of the House of Representatives and lay before that Committee the facts connected with the artillery-forging situation and the need for immediate appropriation of additional funds to be used for that purpose.

The meeting adjourned at 10:00 A. M.

H. P. BINGHAM, *Secretary.*

473 **Meeting of the General Munitions Board held Wednesday, August 8, 1917, at 8:30 a. m., at 945 Munsey Building**

Present: Col. Pierce; Mr. Rosenwald; Col. Blunt; Mr. Bolton; Mr. Scott, Chairman; Mr. Bingham, Secretary.

The reading of the minutes of the previous meeting was dispensed with.

Duck—Canvas for Hangars.—A communication from the Signal Corps dated August 6th asking for clearance on a certain amount of canvas to be used for hangars was presented, and since the necessary canvas was already in the hands of the manufacturers who were to receive the order clearance was granted by the Board.

T. N. T.—Price for Navy.—A communication from Paymaster Hancock asking for confirmation of price for 6,000,000 pounds of T. N. T., his letter August 6th, S–1384.1/2, was presented, and it was the opinion of the Board that since the Secretary of the Navy had approved the price of 42½¢ per pound the Board could see no reason why this purchase should not be made, it being understood that the above material was a part of the 15,000,000 pounds of T. N. T. recently cleared by the Board for the use of the Navy.

Army Equipment—Lathes.—A communication from the Chief of Ordnance dated August 2, No. C. N. E. 451.2132/23, asking
474 for confirmation of prices received on 300 9″ star screw cutting lathes be approved to be purchased from the Seneca Falls Manufacturing Company was presented and it was the opinion of the Board that the purchase should be made at the prices named.

Copper—Clearance for Signal Corps.—A communication dated July 31st from the Signal Corps asking for clearance on a certain amount of copper desired for shipment during August, September, and October was presented and clearance given with instructions that the Raw Materials Committee should be advised on this subject.

Gun Carriages.—A communication from the Ordnance Department dated August 1, 473.34/45 relative to the procurement of certain Barbette carriages was presented and ordered referred to the Committee on Army and Navy artillery for report.

The meeting adjourned at 10:00 A. M.

H. P. BINGHAM, *Secretary.*

475 **Meeting of the Clearance Committee of the War Industries Board held August 9, 1917, at 8:30 a. m., 945 Munsey Building**

Present: Mr. Rosenwald; Col. Blunt; Mr. Meyer; Col. Pierce; Dr. Simpson; Maj. Starrett; Mr. Bolton; Mr. Scott, Chairman; Mr. Bingham, Secretary.

The reading of the Minutes of the previous meeting was dispensed with.

Steel—Watertown Arsenal.—A communication from the Chief of Ordnance dated August 8th relative to certain structural steel desired by the Watertown Arsenal for the construction of a new foundry and need for expediting this material was presented and ordered referred to Mr. Meyer for action.

Steel—Ferro-manganese desired by Watertown Arsenal.—A communication from the Chief of Ordnance dated August 6th calling attention to an order for ferro-manganese placed by the Watertown Arsenal and asking that this material be expedited was presented and referred to Mr. Lovett for action.

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Cement desired by Watertown Arsenal.—A communication from the Watertown Arsenal dated August 3rd asking for the procurement of 8,500 bbls. of cement was presented and referred to Mr. Meyer for action.

Steel—Cylinder castings.—A communication from the Ordnance Department dated August 6th asking for advice as to price on
476 certain steel cylinder castings needed by Division T of the Ordnance Department for use in proposed plant for the manufacture of nitrate which this division was instructed to build was presented and referred to Mr. Meyer for report.

Instructions to Board.—General Order No. 20, dated August 1, was presented and read for the information of the Board, this dealing with the handling of publicity.

Cantonment Construction—Compensating Civil Engineers.—A communication from Major Starrett, dated August 7th, relative to compensation to be paid Civil Engineers for preliminary professional services on cantonments and submitting plan was presented to the Board. It was moved that the principle laid down in Major Starrett's communication for the compensation for such services be approved.

Steel—Key Bridge.—A communication from Col. Fiske confirming his desire to procure certain structural steel for the building of the Key Bridge and asking for prices and delivery was submitted to the Board and referred to Mr. Meyer to arrange the price, and later to Mr. Lovett, Director of the Priorities, for shipment.

Lumber—Purchases by Imperial Munitions Board of Canada.—A communication from Mr. Downman, dated July 28th, relative to ship timber which the Imperial Munitions Board had purchased in this country, and the question as to interference with our shipbuilding program and the fact that they had purchased at a cheaper price than the United States Government was presented and referred to Mr. Bolton to take up with Mr. Downman.

Lumber—Purchase at Newport News.—A communication from Mr. Downman, dated August 8th, stating that the Navy was purchasing lumber for their building requirements at Newport News with-
477 out consulting the Lumber Committee was presented and ordered referred to Mr. Bolton to take up this matter with Admiral Harris.

Artillery Forgings—Recommendation of contractors.—The following recommendations for contractors to undertake gun forging work for the Bureau of Ordnance, dated July 27th, from the Committee on Army and Navy Artillery were presented and confirmed by the Board.

1. With the Tacony Steel Company.
2. With the American Radiator Company.
3. With the Taylor-Wharton Iron and Steel Company.

The meeting adjourned at 10:00 A. M.

H. P. BINGHAM, *Secretary.*

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